NOTICE OF MEETING
Tuesday, February 21, 2023 3:30 to 5:00 p.m.
Email Samantha Maheu at smaheu@ucsd.edu to obtain the Zoom link.

ORDER OF BUSINESS

(1) Minutes of Meeting of November 29, 2022 8

(2-7) Announcements

(a) Chair Nancy Postero Oral
(b) Chancellor Pradeep Khosla Oral
(c) UC Retirement Program Updates Oral
   Joel Dimsdale, Faculty Retirement Liaison

(8) Special Orders

(a) Consent Calendar Oral
   2022-23 Nominations for Donald F. Tuzin Distinguished Service Award

(9) Reports of Special Committees

(10) Reports of Standing Committees

(a) Senate Council, John Hildebrand, Senate Vice Chair; Alison Coil, Professor, Department of Physics; and Shelley Wright, Associate Professor, Department of Physics
   • Proposal to Establish a Department of Astronomy and Astrophysics

(b) Undergraduate Council, Bonnie Kaiser, Chair; and Angela Booker, Eighth College Provost
   • Proposal to Establish the Eighth College Academic Plan

(c) Graduate Council, Timothy Gentner, Chair; and Todd Gilmer, Professor, Herbert Wertheim School of Public Health & Human Longevity Science
   • Proposal to Discontinue the Master of Advanced Studies in the Leadership of Healthcare Organizations

(d) Graduate Council, Timothy Gentner, Chair; and Vincent Nijs, Associate Dean, Rady School of Management
   • Proposal to amend San Diego Divisional Senate Regulation 702, Requirements for the Master of Business Administration (M.B.A.) Degree

[Any member of the Academic Senate may attend and make motions at meetings of the Representative Assembly; however, only members of the Representative Assembly may second motions and vote.]
(11) Reports of Faculties

(a) Health Sciences Faculty Council, Kristin Mekeel, Vice Chair; and Sean J. Evans, Associate Dean for Undergraduate Medical Education
   • Proposal to amend San Diego Divisional Senate Manual Appendix 5.7, Bylaws of the Faculty of the School of Medicine

(b) Revelle College Faculty, Paul Yu, Provost
   • Proposal to amend San Diego Divisional Senate Regulation 605, Academic Requirements of Revelle College

(12) Petitions of Students [none]

(13) Unfinished Business [none]

(14) New Business
SAN DIEGO DIVISIONAL REPRESENTATIVE ASSEMBLY MEETING ZOOM ATTENDANCE INSTRUCTIONS

A  Logging into the Meeting

1  Senate Members who are not Representative Assembly Members & Invited Guests

RSVP prior to the start of the meeting to obtain the meeting link: email Samantha Maheu at smaheu@ucsd.edu.

2  Representative Assembly Members

Representative Assembly members are not required to RSVP for the meeting. The Senate Office will distribute a meeting link to all members via email. Contact Samantha Maheu at smaheu@ucsd.edu if you are an Assembly Representative and you did not receive the meeting link.

B  Meeting Participation

When you join the meeting, you will be placed in a waiting room until the meeting host admits you into the meeting. Please log in 15 minutes early (at 3:15) to ensure that you are admitted to the meeting before it starts (at 3:30).

Your audio will be disabled by default when you enter the meeting; please refrain from turning on your microphone unless called upon by the Chair.

During the meeting, the Chair will call for questions and comments at the appropriate intervals, as usual, and you may raise your electronic hand in Zoom to request to speak. However, discussion may be limited due to the Zoom format of the meeting. Thus, participants are strongly encouraged to review the meeting materials in advance of the meeting and send questions to academicsenateoffice@ucsd.edu with the agenda topic number or proposal title in the subject line of the email, by noon on Friday, February 17, 2023. Your questions will be shared with the presenters so that they may address them in their presentations, and thus help to mitigate the challenge presented by a large Zoom meeting.

Following discussion of items that require a vote, a poll will pop-up on your screen to vote. As with in-person meetings, only Representative Assembly members may vote. Primary Representatives and Alternate Representatives should coordinate their attendance and voting for this meeting. Both may attend; however, Alternate Representatives may only vote in the absence of the Primary Representative. Please coordinate who will attend and cast votes in advance of the meeting.

C  Additional Zoom Meeting Note

Please use your actual first and last name with your Zoom account; the Senate Office must be able to establish your identity in order to admit you into a Representative Assembly meeting.

Instructions on how to manage your Zoom profile can be found here:
https://support.zoom.us/hc/en-us/articles/201363203-Customizing-your-Profile
# REPRESENTATIVE ASSEMBLY MEMBERSHIP - 2022/2023 Roster

## EX OFFICIO MEMBERS

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## ELECTED MEMBERS & ALTERNATES

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**ADVISORS**

**PRIMARY MEMBERS**

**ALTERNATE MEMBERS**

**RESEARCH ADVISOR - GC**

- Orlov, Dmitry
  - Years: 2023/2024
  - Melis, Carl
    - Years: 2023/2024

**RESEARCH ADVISOR - HS**

- Groessl, Erik
  - Years: 2023/2024
  - Liu, Lin
    - Years: 2023/2024

**RESEARCH ADVISOR - SIO**

- Waterhouse, Amy
  - Years: 2023/2024
  - Mellors, Robert
    - Years: 2023/2024

**GRADUATE STUDENT ADVISOR**

- Bertelmann, Mikah
  - Years: 2022/2023
  - Elkobi, Jonathan
    - Years: 2022/2023

**UNDERGRADUATE STUDENT ADVISOR**

- Callahan, Rhianen
  - Years: 2022/2023
  - Yang, Sky
    - Years: 2022/2023
Chair Postero called the meeting to order. A quorum was present (see attached attendance sheet), along with other Academic Senate members and guests. Chair Postero welcomed everyone to the second Representative Assembly meeting of the 2022-2023 academic year. Chair Postero reviewed the Academic Senate Bylaws governing membership, privileges of the floor, and voting.

**Minutes of the Meeting on October 25, 2022**

The October 25, 2022 meeting minutes were approved as submitted.

**Announcements by the Chair of the Division**

**Systemwide Updates**

**UAW Strike Update**

As of the meeting date, tentative agreements (subject to ratification) were reached with the UAW on new five-year contracts for Academic Researchers and Postdoctoral Scholars, but negotiations were ongoing for Academic Student Employees (teaching assistants/readers/tutors) and Graduate Student Researchers. [After the meeting, on December 23, 2022, new contracts were ratified for Graduate Student Researchers and Academic Student Employees.]

Chair Postero acknowledged that it was a difficult time for faculty, and reiterated that faculty must make their own strike-related decisions. There have been multiple communications sent from the Senate and they are posted on the Senate website (https://senate.ucsd.edu/).

Neither the Systemwide nor Divisional Senate has made any changes to Senate policy in response to the strike. The Senate continues to monitor policies and regulations under Senate purview, such as grading policies and student petitions, and work with the Registrar to mitigate impacts on students. The Registrar extended the official deadline for submitting grades for Fall quarter from December 13th at 11:59 pm to December 20th at 11:59 pm. Blank grades on transcripts have negative impacts on students. Instructors who have decided not to submit grades have been encouraged to consider the impact on the most vulnerable students. The Division of Undergraduate Education and the Registrar have worked to identify the most vulnerable students and will send out a list of those names to Instructors to remove the onus on students to ask their Instructors to submit grades for them.
**Chancellor Pradeep Khosla Remarks**

Chancellor Khosla addressed the Assembly regarding three topics: the UAW strike, budget, and housing.

**UAW Strike**
Chancellor Khosla remarked that potential divides in the campus community, especially between mentors and mentees, as a result of the strike is a serious concern going forward. There is uncertainty about how UC is going to manage the salary increases that will accompany the settlement of the strike. Chancellor Khosla noted that other sources of revenue, such as new construction or housing, cannot be used at this time to fund salaries since they are either a one-time budget allocation (construction) or a self-sufficient enterprise (housing). Money allocated for employee pay has to be used for that purpose only. He reiterated UCSD’s recent graduate funding reforms, which included the commitment for graduate students to earn a salary or stipend of at least $30,000 per year (12 months, including summer). The funding models for graduate students are being reviewed to see what makes sense going forward.

**Budget**
Chancellor Khosla reported that since the state is already predicting a large deficit, it is unlikely that the UC system will be given more money in the upcoming budget cycle.

**Housing**
For faculty housing, the Zero Interest Program (ZIP) was created and Framework is open. [More information on those programs is provided below in the Faculty Housing Updates section]. Several new graduate student housing buildings (Mesa Nueva, Nuevo East, Nuevo West) have been opened over the past few years, which has provided many graduate students the ability to live close to campus, and rates for those buildings have been kept 20% below market rates. Additional new student housing, including housing for transfer students, is being developed on campus and at locations near the blue line trolley. One of the new undergraduate housing projects has been finished (North Torrey Pines Living and Learning Neighborhood), and several other projects have either been approved (Pepper Canyon West Living & Learning Neighborhood) or are planned for the future (Ridge Walk North Living & Learning Neighborhood and Eighth College housing). UCSD was granted $100 million from the state to subsidize housing for 1,000 of the neediest students.

**Q&A**
An RA member asked how faculty who fund their research with grants will be affected if the GSR salaries get raised. The Chancellor answered that it is likely that the salaries will get raised, but the UC system is unlikely to receive additional money from the state at this time. He noted that UCSD will need to examine the graduate funding model once a decision is made regarding the graduate students’ salaries.

A student advisor asked what happens if the strike does not get resolved before grades are due for Fall quarter and if the Senate would consider changing any grading policies in response to the strike. Chair Postero answered that the Senate has been monitoring the grading situation but has not made any changes to Senate policies at this time.

Minutes are recorded in the order of the meeting agenda.
A faculty member noted that some departments that have raised their GSR stipends received unfair labor practice claims. The Chancellor answered that although it may have been the right thing to do to raise wages, the union views it as “going around them”, and he noted that stipends should not be changed in any way during the strike negotiations.

A faculty member asked if there is any other source of money that can be used for graduate funding, such as new construction. The Chancellor answered that money allocated to pay salaries can only be used for salaries, but there could be potential other sources. He noted that the construction budgets are one-time allocations and are not recurring allocations like salaries.

A RA member asked if departmental TA allocations will be affected by the strike. The Chancellor responded that $8 million more was put into the TA allocation pool last year, and reiterated the commitment for a guaranteed $30,000 stipend for 12 months. Chair Postero noted that the stipend guarantee was a step in the right direction but that it may not have been enough since students are still feeling strapped. The Chancellor responded that the stipend amount was what the UAW allowed the Administration to do, and said that the funding models are being reviewed to see what would make sense going forward.

A RA member asked if cheaper housing could be provided to TAs and GSRs. The Chancellor answered that UCSD has added a lot of new graduate student housing over the past few years, even though the number of graduate students has not grown significantly. He noted that if UCSD had not added all of that new housing, then more graduate students would be living in the community and paying even higher rates since UCSD has kept rates to 20% below market. The Chancellor noted that UCSD’s housing portfolio has to be a self-sufficient enterprise and UCSD has to balance the mortgages and cash flows of all buildings on campus. He also noted that the rumor that faculty housing can be subsidized is misdirected and not true. The Chancellor reported that the focus recently has been to add more undergraduate housing, since that population has grown significantly, and that several new buildings are planned over the next few years. While that is happening, the Chancellor can switch the focus back to graduate housing. He noted that UCSD received a $100 million interest-free loan from the state to subsidize housing for the 1,000 neediest students.

Vice Chair Hildebrand noted that since the cost of TAs is likely to go up, fewer students will be hired as a result, and that there may be a crisis during recruitment with so much uncertainty regarding how many students can be hired. The Chancellor answered that he is worried the most about the cultural fracture between faculty/faculty and students/faculty. He wants to increase the number of graduate students to be closer to 25-30% of the student population but expanding will be a challenge. The Chancellor noted that UCSD is a postdoc-heavy institution, which is a result of faculty making that hiring choice, so there will need to be an incentive to focus the hiring back to PhD students instead.

An RA member commented that a Senate-Administration workgroup should be created to examine issues related graduate funding and changes required as a result of the strike. Chair Postero commented that she would work with the Administration on that idea.
Faculty Housing Updates by Allorah Pradenas, Assistant Vice Chancellor and Chief of Staff for the VC-CFO; Marie Carter-Dubois, Associate Vice Chancellor for Resource Administration; and Cynthia Palmer, Assistant Vice Chancellor for Academic Personnel

Rental options are being developed to meet both the short-term and long-term needs of the University community. La Jolla del Sol Apartments still provide priority access for incoming UCSD faculty. Framework is a brand-new community owned by UCSD with dedicated apartments for UCSD and UCSD Health faculty and staff. It is located downtown near the UC San Diego Park & Market building and a blue line trolley stop. UCSD is also acquiring additional land along the blue line trolley for public/private developments, and there are additional public/private developments near both the Hillcrest and La Jolla campuses. UCSD offers four programs to assist faculty with down payments and home ownership:

- Faculty Recruitment Allowance Program (FRAP) (existing program; allowance; for down payment, but may also be used for childcare expenses, education, or similar expenses)
- Zero Interest Program (ZIP) (new program; loan with a forgivable feature; for down payment)
- Mortgage Origination Program (MOP) (existing program; UCOP managed loan; for mortgage)
- Supplemental Home Loan Program (SHLP) (existing program; loan; for mortgage)

Some of the programs are allowed to be used in combination.

For more information, please visit the Faculty Housing Assistance Program website (https://evcra.ucsd.edu/housing/) and see page 1 of the presentation slides.

Research Integrity Updates by Corinne Peek-Asa, Vice Chancellor for Research; and Angela McMahill, Assistant Vice Chancellor for Research Compliance and Integrity

An overview of the research misconduct process and data for the past fiscal year were provided. Camille Nebeker was hired as the Research Ethics Program Director in February 2022 and Starr Culver was hired as a new program manager in the VCR office in December 2021. The strategic plan to enhance the Research Ethics Program includes: new educational initiatives to focus on building campus capacity to promote ethical and responsible research; relocation of the Research Ethics Office, which now provides open space to encourage cross disciplinary engagement and the ability to host gatherings; and expanded national and local engagement. The Research Compliance and Integrity (RCI) Office provides education, orientations, and communication regarding research ethics. Faculty can reach out to the RCI office with any questions or to set up training.

More information on research integrity can be found here: https://blink.ucsd.edu/research/policies-compliance-ethics/ethics/index.html and page 10 of the presentation slides.

Minutes are recorded in the order of the meeting agenda.
Special Orders

Consent Calendar

Committee Annual Reports

No objections were received, and the following reports were adopted.

- Committee on Research & Research Grant Committees
- Educational Policy Committee
- Committee on Committees

2022-23 Nominations for Donald F. Tuzin Distinguished Service Award
This item was deferred to a future meeting.

Reports of Special Committees [None]

Reports of Standing Committees

a. Graduate Council, Timothy Gentner, Chair; and George Tynan, Chair, Department of Mechanical and Aerospace Engineering. Proposal to change the name of the Master of Advanced Studies in Architecture-based Enterprise Systems Engineering to the Master of Advanced Studies in Convergent Systems Engineering with a specialization in Architecture-based Enterprise Systems and to establish two graduate degree specializations in Convergent Systems Engineering: Cyber-Physical Social Systems and Value Supply Chains.

Chair Postero introduced Chair Tynan, who gave an overview of the proposal. The MAS program is adapting to today’s need for new systems engineering methods, processes, and tools. The existing curricula, pedagogy, courses, and processes of the Architecture-Based Enterprise Systems Engineering (AESE) program will be utilized, and two new specializations in Cyber-Physical Social Systems (CPSS) and Value Supply Chains (VSC) will be created. The new specializations allow students to be exposed to more areas of complex systems engineering. The program is designed for industry students and will continue to be offered full-time and part-time.

GC Chair Gentner made the following motion. Because the motion was made on behalf of a Senate committee, no second was required. Senate Chair Postero opened the floor to questions and discussion of each motion.

Motion: Proposal to change the name of the Master of Advanced Studies in Architecture-based Enterprise Systems Engineering to the Master of Advanced Studies in Convergent Systems Engineering with a specialization in Architecture-based Enterprise Systems and to establish two graduate degree specializations in Cyber-Physical Social Systems and Value Supply Chains.
- Questions & Discussion: None
- Vote: The proposal was approved by majority vote.

See page 56 of the meeting materials, and page 21 of the presentation slides.

b. Graduate Council, Timothy Gentner, Chair; and Elizabeth Komives, Professor, Department of Chemistry and Biochemistry. Proposal to establish four PhD degree specializations in Biochemistry and Molecular Biophysics: Computational Science, Multiscale Biology, Quantitative Biology, and Interdisciplinary Environmental Research.

Chair Postero introduced Professor Komives, who provided an overview of the proposal. Before 2021, the Department of Chemistry and Biochemistry had one PhD degree program in Chemistry, which included cross-campus training opportunities in four specializations. In 2021, a second PhD program in Biochemistry and Molecular Biophysics was approved but the four specializations did not automatically transfer to the new degree so students have been unable to participate in those training opportunities. The proposal is to associate the existing four specializations with the new PhD in Biochemistry and Molecular Biophysics.

Motion: Proposal to establish four PhD degree specializations in Biochemistry and Molecular Biophysics: Computational Science, Multiscale Biology, Quantitative Biology, and Interdisciplinary Environmental Research.

- Questions & Discussion: None
- Vote: The proposal was approved by majority vote.

See page 57 of the meeting materials, and page 29 of the presentation slides.

Reports of Faculties [None]

Petitions of Students [None]

Unfinished Business [None]

New Business [None]

Chair Postero called for any new business.

There being none, the meeting was adjourned at 4:53 p.m. Recorded by Jenna Lucius, Senior Senate Analyst.
# EX OFFICIO MEMBERS

- **POSTERO, NANCY GREY**  
  Chair, San Diego Division
- **HILDEBRAND, JOHN A**  
  Vice Chair, San Diego Division
- **POWELL, HENRY C**  
  Parliamentarian, San Diego Division
- **KHOSLA, PRADEEP K**  
  Chancellor, UC San Diego
- **SIMPSON, ELIZABETH H**  
  Executive Vice Chancellor, Academic Affairs
- **LEINEN, MARGARET S**  
  Vice Chancellor, Marine Sciences
- **JAVIDI, TARA**  
  Immediate Past Chair, San Diego Division
- **PEEK-ASA, CORINNE LEE**  
  Vice Chancellor, Research Affairs
- **KAISER, BONNIE**  
  Chair, Undergraduate Council
- **COOK, GEOFFREY WILLIAM**  
  Chair, Educational Policy
- **BIESS, FRANK PETER**  
  Chair, Academic Personnel
- **GENTNER, TIMOTHY Q**  
  Chair, Graduate Council
- **PROVENCE, MICHAEL THOMAS**  
  Chair, Planning & Budget
- **SINHA, SHANTANU**  
  Chair, Diversity & Equity
- **YANG, JING**  
  Chair, Research
- **KIRSH, DAVID JOEL**  
  Chair, Campus & Community Environment
- **PARDO GUERRA, JUAN PABLO**  
  Chair, Faculty Welfare
- **BETTS, JULIAN**  
  Chair, Admissions
- **LLEWELLYN SMITH, STEFAN G**  
  Chair, Privilege & Tenure
- **HEYMAN, GAIL D**  
  Chair, Committee on Committees
- **KENYATTA, KAMAU**  
  Senior Representative, Academic Assembly
- **CESSI, PAOLA**  
  Senior Representative, Academic Assembly
- **DE SA, VIRGINIA**  
  Senior Representative, Academic Assembly
ELECTED MEMBERS & ALTERNATES

MARSHALL COLLEGE
☐ BUSSEY, THOMAS J
   Primary Representative
☐ DAHL, GORDON BOYACK
   Primary Representative
☒ NGUYEN, TRUONG QUANG
   Alternate Representative
☐ XU, SHENG
   Alternate Representative

MUIR COLLEGE
☐ COOKE, JAMES EDWARD
   Primary Representative
☐ SAIER, MILTON H
   Primary Representative
☒ MUSEUS, SAMUEL DAVID
   Alternate Representative
☐ OPATKIEWICZ, JUSTIN PAUL
   Alternate Representative

REVELLE COLLEGE
☐ MUENDLER, MARC ANDREAS
   Primary Representative
☒ PEKKURNAZ, GULCIN
   Primary Representative
☐ GRAEVE, OLIVIA A
   Alternate Representative
☐ RICHARDS, STEPHANIE F
   Alternate Representative

ROOSEVELT COLLEGE
☐ CHENG, LI-TIEN
   Primary Representative
☐ KEHLER, ANDREW SCOTT
   Primary Representative
☐ MOHAMMADI, AMIR
   Alternate Representative
☐ PATTERSON, PATRICK HYDER
   Alternate Representative

SIXTH COLLEGE
☒ MACAGNO, EDUARDO R
   Primary Representative
☒ ZLATOS, ANDREJ
   Primary Representative
☐ STEIGER, RAND
   Alternate Representative

WARREN COLLEGE
☐ XIAO, MING
   Primary Representative
☐ WESLING, MEGAN E
   Alternate Representative

EMERITUS FACULTY
☐ WATSON, JOSEPH W
   Primary Representative
☐ ADLER, STEVEN
   Alternate Representative

SEVENTH COLLEGE
☐ DRESSER, MARK
   Primary Representative
☐ KENWORTHY, LANE A
   Primary Representative
☒ ARCOS HERRERA, CAROL
   Alternate Representative
☒ BORGO, DAVID GARCIA
   Alternate Representative

ANESTHESIOLOGY
☐ ZEIDAN, FADEL
   Primary Representative
☐ WALLACE, MARK S
   Alternate Representative
ANTHROPOLOGY
☒ MARCHETTO, MARIA CAROLINA
  Primary Representative
☒ BRENNER, SUZANNE A
  Alternate Representative

BIOENGINEERING
☒ FRALEY, STEPHANIE I
  Primary Representative
☐ MCVEIGH, ELLIOT R
  Alternate Representative

CELL & DEVELOPMENTAL BIOLOGY
☒ KIGER, AMY
  Primary Representative
☐ TOUR, ELLA
  Alternate Representative

CELLULAR & MOLECULAR MEDICINE
☒ DOWDY, STEVEN F
  Primary Representative
☐ CORBETT, KEVIN DANIEL
  Alternate Representative

CHEMISTRY & BIOCHEMISTRY
☒ JOSEPH, SIMPSON
  Primary Representative
☒ MOLINSKI, TADEUSZ F
  Alternate Representative
☐ STALLINGS, DONTARIE M
  Primary Representative
☐ XIONG, WEI
  Alternate Representative

COGNITIVE SCIENCE
☒ XIA, HAIJUN
  Primary Representative
☐ FLEISCHER, JASON
  Alternate Representative

COMMUNICATIONS
☒ ZILBERG, ELANA J
  Primary Representative
☐ DOMINGUEZ RUBIO, FERNANDO
  Alternate Representative

CSE
☒ MICCIANCIO, DANIELLE
  Primary Representative
☐ ORAIOLOGLU, ALEX
  Primary Representative
☒ SNOEREN, ALEX C
  Primary Representative

DERMATOLOGY
☐ DORSCHNER, ROBERT A
  Primary Representative
☐ DI NARDO, ANNA
  Alternate Representative

ECE
☐ PAL, PIYA
  Primary Representative
☒ SCHURGERS, CURT
  Primary Representative
☐ TOURI, BEHROUZ
  Primary Representative
ECOLOGY, BEHAVIOR & EVOLUTION
☑ CLELAND, ELSA E
   Primary Representative
☐ KOHN, JOSHUA R
   Alternate Representative

ECONOMICS
☐ ALON, TITAN MICHAEL
   Primary Representative
☐ BOOMHOWER, JUDSON P
   Alternate Representative
☐ ZHU, YING
   Primary Representative
☐ MECKEL, KATHERINE
   Alternate Representative

EDUCATION STUDIES
☑ EGUCHI, AMY
   Primary Representative
☑ WISHARD GUERRA, ALISON G
   Alternate Representative

EMERGENCY MEDICINE
☑ DAMEFF, CHRISTIAN JORDAN
   Primary Representative
☐ LINDHOLM, KARL PETER
   Alternate Representative

ETHNIC STUDIES
☐ FUSTE, JOSE IGNACIO
   Primary Representative
☐ SASAKI, CHRISTEN T
   Alternate Representative

FAMILY & PREVENTIVE MEDICINE
☐ TAI-SEALE, MING
   Primary Representative
☐ ALLISON, MATTHEW AUBREY
   Alternate Representative

GLOBAL POLICY AND STRATEGY
☑ MCINTOSH, CRAIG
   Primary Representative
☐ BAZZI, SAMUEL ALI
   Alternate Representative
☑ PRATHER, LAUREN R
   Primary Representative
☐ WALTER, BARBARA FLORENCE
   Alternate Representative

HALICIOGLU DATA SCIENCE INST
☑ DANKS, DAVID JOSEPH
   Primary Representative
☐ POLITIS, DIMITRIS
   Alternate Representative

HISTORY
☐ COWAN, BENJAMIN A
   Primary Representative
☐ EDINGTON, CLAIRE ELLEN
   Alternate Representative
☐ GERE, CATHERINA M
   Primary Representative
☐ PATTERSON, PATRICIA
   Alternate Representative

HWSPH
☑ SALEM, RANY MANSOUR
   Primary Representative
☐ BOUTELLE, KERRI
   Alternate Representative
☑ SHI, YUYAN
   Primary Representative
☐ THOMAS, RONALD G
   Alternate Representative

LINGUISTICS
☑ STYLER, WILLIAM F
   Primary Representative
☐ MAYBERRY, RACHEL IRENE
   Alternate Representative
## LITERATURE

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## MUSIC

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## NANOENGINEERING

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## NEUROBIOLOGY

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## NEUROLOGICAL SURGERY

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PSYCHOLOGY
☐ MCCULLOUGH, MICHAEL E
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   Primary Representative
☐ BRADY, TIMOTHY
   Alternate Representative
☐ FERREIRA, VICTOR S
   Alternate Representative

RADIATION MEDICINE & APPLIED SCIENCES
☐ BANEGAS, MATTHEW PATRICK
   Primary Representative
☐ MOORE, KEVIN LAWRENCE
   Alternate Representative

RADIOLOGY
☒ MAREK BYKOWSKI, JULIE LYNN
   Primary Representative
☐ RAKOW-PENNER, REBECCA ANN
   Primary Representative

Rady School of Management
☐ GNEEZY, AYELET
   Primary Representative
☐ BANERJEE, SNEHAL
   Alternate Representative
☐ SERRA GARCIA, MARTA
   Primary Representative

SIO
☒ BECKER, JANET MARIA
   Primary Representative
☐ D'ALPOIM GUEDES, JADE A
   Primary Representative
☒ EISENMAN, IAN
   Primary Representative

SOCIOLOGY
☒ GOLDMAN, HARVEY STERN
   Primary Representative
☐ BINDER, AMY JILL
   Alternate Representative
☐ SKRENTNY, JOHN DAVID
   Primary Representative

SSPPS
☒ DORRESTEIN, PIETER C
   Primary Representative
☐ O'DONOGHUE, ANTHONY JOHN
   Alternate Representative

Structural Engineering
☒ TSAMPRAS, GEORGIOS
   Primary Representative
☐ CONTE, JOEL P
   Alternate Representative

SURGERY
☒ BOUVET, MICHAEL
   Primary Representative
☐ FRIEDMAN, RICK ADAM
   Primary Representative
☒ DOBKE, MAREK KRZYSZTOF
   Alternate Representative
☒ DOUCET, JAY J
   Alternate Representative
☐ MADANI, MICHAEL M
   Alternate Representative
### THEATRE & DANCE
- **MCELVER, ROBERT HARRISON**
  - Primary Representative
- **POWELL, ALYSSA**
  - Primary Representative
- **BURELLE, JULIE SARA**
  - Alternate Representative
- **KUHL, CHRISTOPHER AUGUST**
  - Alternate Representative

### URBAN STUDIES & PLANNING
- **FRANK, LAWRENCE DOUGLAS**
  - Primary Representative
- **POWELL, ALYSSA**
  - Alternate Representative
- **KUHL, CHRISTOPHER AUGUST**
  - Alternate Representative

### UROLOGY
- **JAMIESON, CATRIONA H M**
  - Primary Representative
- **ANGER, JENNIFER TASH**
  - Alternate Representative

### VISUAL ARTS
- **IGLESIAS, JANELLE ANN**
  - Primary Representative
- **NEWSOME, ELIZABETH ANN**
  - Alternate Representative
- **ROSE, JORDAN M**
  - Primary Representative
- **WILLIAMS, ALENA J**
  - Alternate Representative
ADVISORS

RESEARCH ADVISOR - GC
☒ ORLOV, DMITIRY
   Primary Advisor
☐ MELIS, CARL
   Alternate Advisor

RESEARCH ADVISOR - HS
☒ GROESSL, ERIK
   Primary Advisor
☐ LIU, LIN
   Alternate Advisor

RESEARCH ADVISOR - SIO
☐ WATERHOUSE, AMY
   Primary Advisor
☒ MELLORS, ROBERT
   Alternate Advisor

GRADUATE STUDENT ADVISOR
☒ BERTELMANN, MIKAH
   Primary Advisor
☐ ELKOBI, JONATHAN
   Primary Advisor

UNDERGRADUATE STUDENT ADVISOR
☒ CALLAHAN, RHIANEN
   Primary Advisor
☐ YANG, SKY
   Primary Advisor
Context

• A very challenging housing market across California and sharp price increases in San Diego are impacting faculty, and are also affecting hiring and retention

• Both the UC system and the campus are responding with new programs and initiatives

• This presentation summarizes all options available at this time and shares some of additional initiatives under way at UC San Diego
2 types of programs

Rental

- Several below market housing options for new hires available today – Typically use on a short-term basis to help new hires transition in San Diego
- Currently developing a broader portfolio of rental options that could meet both short-term and long-term needs of the University community

Ownership

- 4 Programs to assist with down payments/ ownership:
  - FRAP (existing; allowance; for down payment)
  - ZIP (new; loan; for down payment)
  - MOP (existing; loan; for mortgage)
  - SHLP (existing; loan; for mortgage)
## Rental options

<table>
<thead>
<tr>
<th>La Jolla del Sol</th>
<th>Framework (new)</th>
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</thead>
<tbody>
<tr>
<td><strong>Units</strong></td>
<td>380 unfurnished apartments (standard and renovated)</td>
</tr>
<tr>
<td><strong>Eligibility</strong></td>
<td>2 year maximum lease</td>
</tr>
<tr>
<td></td>
<td>Wait time is 6-12 months</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>1BR/1BA: $1,171-$1,869</td>
</tr>
<tr>
<td></td>
<td>2BR/1BA: $1,983-$2,145</td>
</tr>
<tr>
<td></td>
<td>2/BR/2BA: $2,241-$2,436</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>Online <a href="#">Application</a></td>
</tr>
<tr>
<td></td>
<td>Priority access for incoming faculty <a href="#">Faculty Housing Priority Program</a></td>
</tr>
<tr>
<td></td>
<td>87 newly constructed and nicely furnished micro-units located next to Park &amp; Market (Downtown Extension)</td>
</tr>
<tr>
<td></td>
<td>50% reserved for Faculty, 50% for Staff, across both Campus and Health – At this time, 2 year maximum lease</td>
</tr>
<tr>
<td></td>
<td>Average starting monthly rent of $2,275</td>
</tr>
<tr>
<td></td>
<td>Online at <a href="https://framework.ucsd.edu">https://framework.ucsd.edu</a></td>
</tr>
</tbody>
</table>
Expanding the portfolio

UC San Diego’s strategy in response to the housing crisis is to acquire and/or develop rental units. There is no profit to the University. Rents at least 5% below market (no taxable benefit to renters) with annual increases capped at a maximum of 5%

• Opportunistic property acquisition (Framework apartments) next to Park & Market (Downtown Extension)—Available now
  https://framework.ucsd.edu

• Land acquisitions along the UC San Diego Blue Line + Public/Private developments (P3)

• Public/Private developments P3 developments on both Hillcrest (1,000 units) and La Jolla campuses (1,650 units)
Home Down Payment programs

**FRAP**
- Faculty Recruitment Allowance Program (FRAP)
- Eligibility: Full time Senate Faculty
- Program: Primary purpose is support for housing costs. May also support childcare expenses, education or tuition, or similar expenses
- Tax & Repayment implications: FRAP is taxable income in the year used. Payments are taxed at the applicable rate. Full repayment is required if the appointee leaves UCSD before a 5-year period
- Maximum amount: $150K
- Funded by academic units

OR

**ZIP (new)**
- Zero Interest Program (ZIP) loan with a forgivable feature
- Eligibility: Full time Senate Faculty, Health Sciences Clinical Faculty
- Program: ZIP Loan can be combined with a primary MOP loan. 10% of the original balance may be forgiven each year. Max Loan amount: $150K
- Tax & Repayment implications: Forgiven amount is reported as taxable income that year on a W-2, subject to standard withholdings. Balloon payment due at end of 10-year term if any balance remains
- Funded by academic units
## Other UC Loan Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Mortgage Origination Program</th>
<th>Supplemental Home Loan Program</th>
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</thead>
<tbody>
<tr>
<td><strong>MOP</strong></td>
<td>- UCOP- managed loan program with a one-year adjustable interest rate based upon an internal University index (MOP Index); Several loan programs available</td>
<td>- Provides below-market secondary mortgage financing with fixed and adjustable rate options</td>
</tr>
<tr>
<td></td>
<td>- Current rate 3.25%. Academic VC approve up to $1.7M, Chancellor up to $2.37M within Campus allocation</td>
<td>- May be used in conjunction with MOP. Reduces down payment from 10% to 5%</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Eligibility</strong></th>
<th>Full time Senate Faculty (includes Professors of Clinical X) and SMG employees</th>
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<tbody>
<tr>
<td><strong>Not for Health Sciences Clinical Faculty</strong></td>
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<table>
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<tr>
<th>Program</th>
<th>UC Loan Programs</th>
<th>Supplemental Home Loan Program</th>
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<tbody>
<tr>
<td></td>
<td>UC San Diego MOP information</td>
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Allowable Combinations

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<th>ZIP</th>
<th>MOP</th>
<th>SHLP</th>
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<tbody>
<tr>
<td>FRAP</td>
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<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>ZIP</td>
<td>NO</td>
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<td>YES</td>
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<td>MOP</td>
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<tr>
<td>SHLP</td>
<td>YES</td>
<td>YES</td>
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</tr>
</tbody>
</table>

Only FRAP and ZIP cannot be combined.
The triple combinations FRAP + MOP + SHLP or ZIP + MOP + SHLP are allowed.
Contacts

Questions

- General Campus and SIO Senate Faculty – please contact Carlos Hernandez
- Health Sciences faculty – please contact Jackie Corbeil at VCHSAA@health.ucsd.edu
RESEARCH ETHICS PROGRAM UPDATES

- Research Ethics Program Director, Camille Nebeker hired February 2022
- **Strategic Plans** to enhance the Research Ethics Program:
  - Program Manager, Starr Culver hired December 2021
  - New Educational Initiatives have focused on building campus capacity to promote ethical and responsible research
  - Office Relocation and Open Space to encourage cross disciplinary engagement and community, and host gatherings
  - Expanded National and Local Engagement. The program is nationally and internationally recognized. Professor Nebeker has been invited to speak at events hosted by the National Library of Medicine and the National Academies of Science, Engineering and Medicine.
FEDERALLY DEFINED RESEARCH MISCONDUCT

THREE TYPES:

- **Fabrication**: Making up data or results and recording or reporting them
- **Falsification**: Manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record
- **Plagiarism**: Appropriation of another person's words, ideas, processes or research results without acknowledgement, and passing them off as one's own

Other questionable research practices typically resolved by department/research unit lead. Examples: authorship disputes, attribution of credit, data access and use, differences of opinion or honest error.
TOTAL ASSESSMENTS BY VC AREA (FY 2013-2022)

- SIO: 4
- AA: 18
- HS: 37
TOTAL ASSESSMENTS BY DEPARTMENT (FY 2013-2022)

# of Additional RM allegations that are Questionable Research Practices: 40
RESEARCH MISCONDUCT ASSESSMENTS, INQUIRIES, INVESTIGATIONS AND FINDINGS (FY 2013-2022)

Respondent Demographic Information

• Assessment
  • Faculty (M 41, F 2, Unknown 1)
  • Postdoc / Visiting Scholar (M 4, F 1)
  • Graduate Student (M 2, F 0, Unknown 1)
  • Staff (M 4, F 1)
  • Other / Unknown (M 7, F 0, Unknown 1)

• Inquiry
  • Faculty (M 16, F 1)
  • Postdoc (M 0, F 1)
  • Graduate student (M 2, F 0)
  • Staff (M 1, F 1)
  • Unknown (M 1, F 0)

• Investigation
  • Faculty (M 5, F 0)
  • Postdoc (M 0, F 1)

• Finding – 8 findings for 4 Respondents
  • Faculty (M 1, F 0)
  • Postdoc (M 0, F 1)
  • Graduate student (M 2, F 0)
Research Misconduct Review Process

DEFINITIONS:
Allegation: Oral or written statement or other evidence of apparent instance(s) of Research Misconduct.
Research Integrity Officer (RIO): The Vice Chancellor for Research is the RIO and responsible for implementation of the University Research Misconduct Policy.

RIO provides Final Institutional Report (with acceptance to federal/sponsoring agencies as required)
* ORI FINAL DETERMINATION

Potential Research Misconduct (FFP):
- Fabrication
- Falsification
- Plagiarism

Assessment of Allegation Conducted by: RIO (to be completed in brief/reasonable time period) Determines:
- Allegation sufficiently credible and specific
- Falls under definition of misconduct (FFP)
- Jurisdiction under policy and specific federal/funding source requirements
No interviews or data gathering necessary

Other Complaints:
- Authorship dispute
- Data ownership/use
- Copyright infringement
- Collaboration or supervisory issues

Investigation Committee drafts Report
- Sends to RIO, who provide to respondent for comment (14 days)
- Final Investigation report incorporates comments and revised as appropriate
- Final copy provided to RIO

Investigation Conducted by: Investigation Committee
Starts: within 30 days; Complete in: 120 days
- By Thorough, impartial and unbiased examination of all relevant research records and evidence
- Additional interviews of respondent, complainant, any other person identified as having relevant information (interviews recorded, transcribed, and provided to interviewee for correction)
- Pursue all significant issues/leads, including additional instances

Inquiry Conducted by: Inquiry Committee
Notification of committee chair; complete in: 60 calendar days
Determines: Whether an Investigation is warranted
- Reasonable basis for concluding that allegation falls within definition of research misconduct
- Allegation may have substance
- Probable cause
By: Initial review of evidence
- Initial testimony of respondent, complainant, and key witnesses
- Evaluation of evidence and testimony

Inquiry Report within 30 days
- Sends to RIO, who provides to respondent for comment (15 days)
Final Inquiry report provided to RIO
- Provided to federal/sponsoring agencies as required, includes decision to conduct investigation

RIO Initial review; determine type of concern

Research Compliance and Integrity:
Web: http://rci.ucsd.edu; Email: rci@ucsd.edu;
Phone: (858) 822-4939
Research Misconduct FAQ’s: https://blink.ucsd.edu/research/policies-compliance-ethics/ethics/faq.html
UCSD Whistleblower Hotline:
Fraud such as misuse of assets, potential false billings, conflict of interest, or other compliance issues, (877) 319-0265
Graduation Division: http://grad.ucsd.edu
Office of Postdoctoral & Research Scholar Affairs: http://postdoc.ucsd.edu
Office of the Ombuds: https://ombuds.ucsd.edu
## UCSD AND OFFICE OF RESEARCH INTEGRITY (ORI) OPENED CASES AND FINDINGS

<table>
<thead>
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<th></th>
<th>FY2013-2022</th>
<th>10/1/2020-9/30/2021</th>
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<tbody>
<tr>
<td><strong>UCSD</strong></td>
<td>35%</td>
<td>43%</td>
</tr>
<tr>
<td><strong>% of Cases Opened</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>% of Findings:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No RM</td>
<td>65%</td>
<td>68%</td>
</tr>
<tr>
<td>Findings</td>
<td>35%</td>
<td>32%</td>
</tr>
<tr>
<td>Most Common Finding</td>
<td>Falsification/Fabrication</td>
<td>Falsification/Fabrication</td>
</tr>
</tbody>
</table>
The Office of Research Integrity (ORI), Division of Investigative Oversight recently sent an email in response to a case UC San Diego completed and indicated, “UC San Diego is an excellent example of how to perform and document research misconduct proceedings ...”

Allegations that are not research misconduct are classified as “Questionable Research Practices (QRPs)” (authorship disputes, data use and/or ownership, etc.) are referred to the Department Chair or Unit Head for resolution. If the Allegation cannot be resolved, it may be referred to the VCR to facilitate a resolution.

**Coordinated efforts** with multiple offices (e.g., CECO, Legal, AMAS, etc.) for other issues and policy violations.

In FY22, the Research Compliance and Integrity (RCI) Office:

**EDUCATION:** ORI selected UC San Diego to offer National Research Integrity Officer Boot Camp April 2022. RCI hosted first annual Symposium on University Research Fundamental.

Participated in the General Campus new faculty orientations, the postdoctoral scholar orientation (RCI video), the Graduate Division Welcome Week and numerous Department presentations.

**POLICY Easily Available:** Research Misconduct process flow, FAQs, Fact Sheets ([https://blink.ucsd.edu/research/policies-compliance-ethics/ethics/index.html](https://blink.ucsd.edu/research/policies-compliance-ethics/ethics/index.html))

**COMMUNICATION:** Developed and distributed Newsletters and Hot Topics to faculty and research community (approximately every other month).
Questions?
MAS of Convergent Systems Engineering
Prof. George Tynan
November 29, 2022
Problem: Industry is leading a revolution in complex, massively distributed, data-driven systems that rely on data, analytics, and machine learning and modeling to constantly evolve and improve, during ever-shorter iterations.

New systems engineering methods, processes and tools need to be created and translated into education to meet this need at all scales.
**Goals:** Our goal is to teach our students how to think differently:

- how to ask the right questions;
- see the big picture as it evolves; and
- embrace ambiguity as they make decisions in uncertain environments.

Systems engineering students will learn how to create cognitive models to visualize, intuit, and innovate complex systems, and how to orchestrate and rapidly integrate new, complex components.

Students in the program will practice business, leadership, ethics, and teaming skills as they work together on practical systems projects both in-class and onsite during Co-ops with industry partners.

*JSoE, “A BOLD VISION FOR MODERN SYSTEMS ENGINEERING CURRICULA: Educating changemakers for tomorrow’s complex systems companies”, 2019.*
Approach:

Utilize the curricula, pedagogy, and processes of existing Architecture-Based Enterprise Systems Engineering (AESE) program, and existing courses to create two new specializations in Cyber-Physical Social Systems (CPSS) and Value Supply Chains (VSC).

Proposal:


2) Establish two graduate degree specializations in Convergent Systems Engineering: Cyber-Physical Social Systems and Value Supply Chains
## MAE Systems Engineering Degrees

<table>
<thead>
<tr>
<th>Specializations</th>
<th>MAS of Convergent SE</th>
<th>MS of MAE Specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyber-Physical Social Systems (CPSS), Architecture-Based Enterprises (AESE), Value Supply Chain (VSC)</td>
<td>Cyber-Physical Social Systems (CPSS)</td>
<td></td>
</tr>
</tbody>
</table>

| Focus | Products/Services, Enterprise, System of Systems | Products/Services |

| Integration | Team Capstone Project | Exam/Thesis |

| Courses | 5 Core, 4 Specialization, Capstone | 3 Specialization |

| Fulltime/Part-time | Yes (1 year)/Yes (2 year) | Yes (1-year)/Yes (2-years) |

| Hybrid | Yes | No |

| Students | All | All |

| Funding | Self | State |
## MAS CoSE Program Full-Time Course Plan

<table>
<thead>
<tr>
<th>Calendar: Full-time</th>
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<th>FA</th>
<th>WI</th>
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<table>
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<table>
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## MAS CoSE Program Part-Time Course Plan

### Calendar: Part-time (Year 1)

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### Calendar: Part-time (Year 2)

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### Calendar: Part-time (Year 1)

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### Calendar: Part-time (Year 2)

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<td>COSE 230B</td>
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<td>units</td>
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Before 2021, the Department of Chemistry and Biochemistry had one PhD Degree Program that awarded a PhD in Chemistry. This program participated in 4 cross-campus training opportunities that awarded specializations in Computational Science, Multiscale Biology, Quantitative Biology, and Interdisciplinary Environmental Research.

In 2021, we were approved for a second PhD Degree Program that awards a PhD in Biochemistry and Molecular Biophysics. But the specializations did not automatically transfer to this new degree program. We are now requesting that those students (approx. 30% of our total PhD’s) also be able to participate in the 4 cross-campus training opportunities and awarded these same specializations. (some students who transferred to the new degree were already participants)
Subject: Proposal to Establish a Department of Astronomy & Astrophysics

Dear Nancy,

Enclosed, please find a proposal to establish a Department of Astronomy & Astrophysics at UC San Diego. The proposal has completed the administrative review process and we are pleased to submit it for Divisional Senate review.

With best regards,

Elizabeth H. Simmons
Executive Vice Chancellor

Attachment

CC: Dean Antony
    Dean Boggs
    Associate Vice Chancellor Carter Dubois
    Senior Associate Vice Chancellor Continetti
    Vice Chair Hildebrand
    Director Hullings
    Dean Moore
    Assistant Vice Chancellor Sanders
A Proposal for the Establishment of a Department of Astronomy & Astrophysics at UC San Diego

Submitted by

Alison Coil, Department of Physics

On behalf of the Astronomy Task Force:

Kam Arnold, Patrick Diamond, Michael Holst, Dusan Keres, Quinn Konopacky, Karin Sandstrom, Shelley Wright

September 15, 2022
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Proposal for a Department of Astronomy and Astrophysics

History

UC San Diego has a long and illustrious history in the field of Astronomy & Astrophysics, beginning with the founding of the Physics department in 1962. Geoff and Margaret Burbidge, two astronomers and founding members of the department, made fundamental contributions to understanding the origins of elements in the Universe via stellar nucleosynthesis. Astronomers at UC San Diego, led by David Tytler, were pioneers in observationally characterizing the abundance of deuterium in the Universe using early observations from the Keck Observatory, to which UC San Diego has access through the University of California. These observations placed key observational constraints on predictions from the Big Bang model of the universe. Art Wolfe, along with Ray Sachs, developed the theory of gravitationally-redshifted CMB photons (the Sachs-Wolfe effect) and was a leader in the phenomenology of cosmology. Observations with Keck led by UC San Diego faculty have been critical for many fundamental contributions in cosmology, galaxy and stellar evolution, and exoplanets. In particular, UC San Diego has long been recognized as a leader in the field of quasar absorption line studies of the intergalactic medium.

Astronomy & Astrophysics at UC San Diego is currently based in the Organized Research Unit (ORU) of the Center for Astrophysics and Space Sciences (CASS), founded in 1979 by faculty members in the departments of Physics, Electrical Engineering and Computer Sciences, and Chemistry. CASS was founded to provide an institutional framework to strengthen the quality of astrophysics and space sciences education and research at UC San Diego. The ORU enabled many large efforts in instrumentation, observation, and experimentation with space- and ground-based telescopes, as well as high altitude balloons.

Through the framework of CASS, researchers at UC San Diego have made important contributions to astronomical instrumentation on a wide variety of facilities. The detectors used on the first generation of Hubble Space Telescope spectrographs (the Faint Object Spectrometer FOS and the Goddard High Resolution Spectrometer GHRS) were invented and developed in CASS. This first generation of HST instrumentation revolutionized our view of the universe, establishing CASS’s importance in astronomical instrumentation. CASS has also been a leader in X-ray telescope instrumentation including the Burst And Transient Experiment on the Compton Gamma Ray Observatory (launched 1990) and the High Energy X-ray Timing Experiment on the Rossi X-ray Timing Explorer (launched 1995), among others. Innovative instrumentation on ground-based observatories has allowed CASS scientists to test general relativity with unprecedented precision using the Apollo Lunar Laser ranging Instrument on
Apache Point Observatory, installed in 2005. Astrophysicists in CASS also study the earliest phases of the Universe’s evolution from the cosmic microwave background (CMB) radiation enabled through the BICEP Observatory at the South Pole and POLARBEAR in Chile, and CASS is now home to the project office of the new Simons Observatory.

Since its founding, UC San Diego has also been a center of excellence in theoretical astrophysics and closely related fields and has played key roles in many areas of theoretical and computational astrophysics, spanning atomic, nuclear, stellar, particle, and plasma astrophysics. Pioneering work on magnetohydrodynamics was developed by Hannes Alfven (a Nobel Laureate), while W. Ian Axford made notable contributions to particle, including cosmic ray, acceleration. Current efforts range from computationally modeling the first stars in the Universe to nearby galaxies, computational and theoretical studies of the nature of dark matter, as well as theoretical efforts in nuclear and plasma astrophysics, turbulence, and cosmic ray acceleration.

UC San Diego faculty whose research interests are based in astrophysics and space science have included members of the National Academy of Sciences, National Academy of Engineering, and American Academy of Arts and Sciences; and recipients of the National Medal of Science and Presidential Medal of Freedom, among other honors and awards. Researchers at CASS are currently at the forefront of many different fields of astronomy and astrophysics, including supercomputer simulations of galaxy evolution; finding and characterizing exoplanets and understanding their formation; discovery of the nearest and coolest stars and substellar populations; the theoretical underpinnings of star formation; large surveys of high redshift galaxies; characterizing the fluctuations in the CMB and using them to understand the structure and evolution of the universe; and developing instrumentation for Keck, the Thirty Meter Telescope, the Simons Observatory, and many other facilities.

**Need for Program**

The motivation in proposing a new department is to establish UC San Diego as a preeminent national center for Astronomy and Astrophysics research and education. A new department will capitalize on the University of California’s substantial existing investment in astronomical facilities and support the current and future Astronomy and Astrophysics faculty and students at UC San Diego to reach their full research and teaching potential.

Astrophysics is, by its nature, an interdisciplinary area of research. It integrates physics, chemistry, biophysics, geophysics, engineering, computational and data science to address fundamental questions about the origin, phenomena and processes in the Universe. Astrophysics investigates phenomena over a tremendous range of scales of space, time, and energy, from fundamental particles on subatomic scales to cosmology on scales of billions of
light years. The current frontiers of astrophysics, enabled by innovations in instrumentation and investment in new facilities, continue in this strongly interdisciplinary tradition.

Astronomy as a field is expanding rapidly, both nationally and internationally, with enormous resources prioritized for new telescopes, surveys, and facilities. The United States allocates resources to astronomy research primarily through the NSF and NASA, with substantial additional contributions from the DOE. There are several major upcoming national facilities such as the recently-launched James Webb Space Telescope (a $10 billion project which launched in December 2021), the Vera C. Rubin Observatory (a $1 billion project with first light expected in fall 2022), and the Nancy Grace Roman Telescope (a $4 billion NASA project scheduled to launch in 5 years). It is our primary goal to create an environment that allows UC San Diego to be a leader in this exciting, cutting-edge, expanding field.

Astronomy and astrophysics are commonly considered distinct areas of research from physics, with separate scientific societies nationally (American Astronomical Society; with 7000 members and 6 divisions) and internationally (International Astronomical Union), distinct organized units within the NSF (Division of Astronomy) and NASA (Astrophysics Division), and a separate National Academies of Science (NAS) review. Astronomy and Astrophysics also benefit from a huge amount of public interest: astronomy and space are second only to health in science news articles in the nation. These distinctions have resulted in separate cultures and traditions in Astronomy and Astrophysics compared to the broader field of physics. As Frank Shu, one of the most distinguished astrophysicists in the world and a former UC San Diego faculty member, wrote: "Physics is about processes; Astronomy, about objects. The objects that astronomers study have many interesting physical processes going on in them, but the processes are investigated, not in isolation, but in aggregate to deduce the past, present, and future of the host objects. For the physicist, this lack of focus on isolated processes on which one can drill deeply and precisely makes astronomy a "dirty" speculative subject, akin to climate science. This underlying cultural difference between astronomy and physics makes it better for astronomy to be separate from physics when it comes to faculty recruitment, promotion, curriculum development, and course assignment."

Because of the interdisciplinary nature of the research and the structural and cultural distinctions between the fields, top research universities typically have separate departments for astronomy and physics: Harvard, Princeton, Yale, Chicago, Caltech, Columbia, Cornell, University of Washington, and The University of Texas at Austin all have distinct astronomy departments. Within the UC system, both UC Berkeley and UC Santa Cruz have separate departments, while at UCLA astronomy is a “division” within the Physics and Astronomy department, with a separate vice chair for astronomy, an independent graduate program, and separate courses and degree programs.

1 We agree with this sentiment, while noting that astronomy and astrophysics encompasses more than objects; for example, the CMB and gravitational waves would not be considered objects, per se. In astronomy and astrophysics the inputs are not controlled; in this way it differs from much of experimental physics.
The University of California as a system has been a world-wide leader in Astronomy and Astrophysics since the 19th century. UC Observatories owns and operates Lick Observatory in California and co-owns and operates with Caltech the W. M. Keck Observatory in Hawaii, which are among the most productive telescopes in the world. UCOP allocates enormous resources towards the UC access to and involvement in these telescopes (~$8M/yr). The UC system is also uniquely placed within the larger national astronomy community due to its development of and access to not only Lick and Keck but the upcoming Thirty Meter Telescope (TMT). Only a very small number of universities have access to these premier telescope facilities (UC, Caltech, Hawaii, Swinburne, and Yale have access to Keck; Lick is owned solely by UC), and this access allows us to attract the very best researchers in the world, luring astrophysics faculty from MIT and Harvard to UC San Diego. A high fraction of all astronomy publications in the country use data from the Keck telescopes and/or include authors from within the UC system (Crabtree 2008, SPIE, 7016, 40). The astronomy and astrophysics group at UC San Diego aims to capitalize on the investment UC has already made in Lick, Keck, and TMT to attract top faculty and students to our campus. Additionally, UC San Diego is one of the few universities nationally to host a supercomputer center, the SDSC. Access to a local supercomputer center is a major resource and draw for astrophysicists, as numerical simulations are fundamental to interpreting astronomical observations and help drive our field.

As a result, UC San Diego already has a highly competitive Astronomy and Astrophysics research group; currently 14 faculty specialize in this field and are leaders in diverse areas of research spanning the solar system, exoplanets, stars and stellar populations, compact objects, cosmochemistry, the interstellar medium, astroparticle physics, galaxy formation and evolution, the high redshift universe, and cosmology. Our faculty employ techniques spanning observations, experiment, computation, and theory. Within the UC system, UC San Diego has the largest number of astronomy faculty without having a separate astronomy department or division (see table below).

<table>
<thead>
<tr>
<th>Campus</th>
<th>Dept. Name</th>
<th>Number of Astronomy Faculty</th>
<th>PhD Program</th>
<th>NRC ranking Astronomy</th>
<th>Notes on joint faculty</th>
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<tbody>
<tr>
<td>UC Los Angeles</td>
<td>Physics &amp; Astronomy</td>
<td>19</td>
<td>Astronomy</td>
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<td>4 astro faculty joint with Geology</td>
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<tr>
<td>UC Berkeley</td>
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<td>UC Irvine</td>
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<td></td>
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<tr>
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<td></td>
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<tr>
<td>UC Santa Barbara</td>
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<td>Physics with astrophysics emphasis</td>
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<tr>
<td>UC Riverside</td>
<td>Physics &amp; Astronomy</td>
<td>11</td>
<td>Physics with astrophysics track</td>
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<td>1 astro faculty joint with Earth Sciences</td>
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<tr>
<td>UC Merced</td>
<td>Physics</td>
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<td>Physics</td>
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Given the overall growth of astronomy and astrophysics in the US, the major investments that UC has already made in the field, and the existence of a large, existing well-known research group, a new Department of Astronomy and Astrophysics at UC San Diego has the potential to be among the top departments in the country. However, the limitations of our current position within Physics have prevented us from realizing our potential. The Physics department has grown to a very large size and has a number of competing priorities. The astrophysics group has not been able to thrive in recent years within this larger department, leading to 1) a lack of growth of astrophysics faculty in the last decade (our last hire was in 2016), 2) a lack of visibility or ranking for our program, 3) a lack of growth in the undergraduate curriculum, 4) a lack of an astrophysics-focused graduate program, and 5) concerns about department climate. We discuss these issues in further detail below. While the new Astronomy Graduate Program (which started just this year) has alleviated concerns related to a graduate curriculum, the other concerns remain. The astrophysics faculty need autonomy to implement a strategic research and education plan to grow UC San Diego’s impact and status within the international astronomy community, while developing a truly interdisciplinary approach to astrophysics that leverages connections not only to physics but to engineering, math, chemistry, geology, and data science.

A primary motivation for creating a new Astronomy and Astrophysics Department at UC San Diego is to enhance scientific discovery, output, and visibility. The astrophysics group at UC San Diego has not been able to keep pace with the growth of the field while housed within the larger Physics department, as growth and support for astrophysics has not been prioritized within the department. In the last decade the Physics faculty has grown by roughly 50% (from 43 faculty to 66 faculty), while the astrophysics faculty has grown by half this amount, at 27% (from 11 faculty to 14 faculty), despite being one of the main areas of research in the department. Multiple recent proposed hires in astronomy over the last several years have not been approved by the larger department. A new Department of Astronomy and Astrophysics could fully realize the interdisciplinary nature of this field and would have the agility necessary to hire faculty specializing in modern topics that cross university divisions while possibly not fitting into the “mold” of the Physics Department. A department would also allow us to update undergraduate course offerings to reflect modern astrophysics, encouraging scholarship in areas such as data science and climate science, in addition to the physical sciences, as well as expanded enrollments in our courses and the proposed Astronomy and Astrophysics majors and minor.

We include below in Appendix A a detailed vision that the astrophysics faculty have developed together for what we aim to create at UC San Diego. This vision is simply not possible within the larger Physics department, which has competing needs and priorities, and in which astronomy is not prioritized. The astrophysics faculty, through a Task Force appointed by the Dean of Physical Sciences, had numerous discussions with colleagues at other universities, housed both inside of and separate to physics departments. The task force studied academic section models both at UC San Diego and other UC campuses and concluded that a section model for the astrophysics group at UC San Diego within the Physics department is not viable. Only the
autonomy of a separate department would allow us to realize our scientific vision, strategic research plan, and capitalize on the forefront growth of astronomy and astrophysics both nationally and internationally. The strategic hiring plan that the astrophysics faculty developed over five years ago remains the same today, as we have not been able to realize it through hires; the last faculty hire through the astrophysics group was in 2016. In detail, our strategic hiring plan included four prioritized research areas: exoplanets and astrobiology, gravitational waves, theoretical astrophysics, and data science.

Nationally, the number of both undergraduate majors and graduate PhDs earned in astronomy has been steadily growing, as seen in the figure below. At the undergraduate level in particular the numbers have increased substantially, by a factor of almost 3 since 2000. At the graduate level the numbers have almost doubled in the same period. UC San Diego has not been keeping up with these trends, due to astronomy and astrophysics being housed within a very large department with competing priorities. As such, we are falling behind our national competition. A key aspect of this proposal is the development of a modern undergraduate curriculum in astronomy and astrophysics, with two tracks for majors. Given the numbers shown here we expect to have high enrollments both in our courses and in the major.

Beyond the lack of growth in the Astronomy and Astrophysics faculty and the lack of an undergraduate major, our current faculty have also been unable to competitively recruit graduate students. This is due to several related issues—the lack of visibility for our graduate program, our inability to compete for top graduate students with other institutions, and the lack of autonomy and flexibility in designing a competitive degree program. This situation is now being rectified with the creation of a new Ph.D. program in Astronomy, which began in fall 2021.
We are currently in our first admissions and recruitment cycle, implementing best practices around holistic admissions, utilizing bias training, both triage and full rubrics, and interviews. We are pleased to report that we had 163 applications and have an incoming class of 10 students. While only in its first year, the program has substantially increased our application pool (by roughly 50%), and the pool is far stronger and more diverse than in the past. Combining this astrophysics-specific graduate program with a new department will create a highly-competitive environment for graduate students, particularly given our unique, world-leading telescope and supercomputer access. The creation of a department, along with a new dedicated undergraduate degree program, would raise our profile and immediately establish UC San Diego as a nationally highly-ranked astrophysics program.

In addition, we anticipate that creating this new department will increase the diversity among students and faculty in the Division of Physical Sciences at UC San Diego. The inaugural cohort of the Astronomy Graduate Program is 90% (9/10) women; for comparison 16% of the current Physics department graduate students are women. The astrophysics group is strongly committed to supporting equity, diversity, and inclusion (EDI) and to creating a vibrant, inclusive environment for students, staff, researchers, and faculty. A separate department will allow us to create and sustain this environment. Nationally, astronomy is more diverse than physics, both for women and underrepresented minorities, and a separate department would allow the astrophysics group at UC San Diego to become more inclusive and diverse, with autonomy over our student mentoring and professional development, degree programs, hiring, and department climate. The recent NAS Decadal Survey on Astronomy and Astrophysics 2020 Report\(^2\) includes a chapter with specific EDI recommendations for departments and funding agencies. We are eager to implement these recommendations, which we can not do within the Physics department. We also aim to more fully integrate researchers into the governance and structure of the department. More details of our vision are given in Appendix A.

In sum, a new department will capitalize on existing resources both locally at UC San Diego and across the UC system in astrophysics, to establish UC San Diego as a preeminent national center for astronomy and astrophysics research and education. A department will allow us to update our course offerings and student support and training, with an emphasis on EDI. The proposed undergraduate program will improve the recruitment and training of astrophysics-oriented students through a dedicated curriculum that aims to improve the outcomes for students beyond their degrees. The department will enhance UC San Diego’s profile, by allowing us to be ranked nationally in astrophysics, increasing our ability to recruit talented students, researchers, and faculty members to UC San Diego.

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Fit Within UCSD

The new department of Astronomy & Astrophysics would be housed in the Division of Physical Sciences, along with the departments of Physics, Chemistry & Biochemistry, and Mathematics. It will have strong synergies with multiple departments across campus, including Physics, MAE, ECE, Chemistry & Biochemistry, and SIO, as well as the San Diego Supercomputer Center (SDSC) and Halıcıoğlu Data Science Institute (HDSI). We aim to maintain healthy scientific interactions with the Physics department, creating a program that stimulates interactions between students, researchers, and faculty in both the Astronomy & Astrophysics and the Physics department. Avenues for maintaining strong scientific interactions include students taking courses in both departments, joint faculty appointments, affiliated faculty, and a joint research seminar series.

We recommend that CASS be integrated into the Astronomy & Astrophysics Department, with the details of that transition to be worked out by campus entities including the Dean of Physical Sciences and the Vice Chancellor for Research. The researchers in CASS are an integral part of the astrophysics group, and we will ensure that they are strongly included in the activities of the new Astronomy & Astrophysics Department.

The new department will offer undergraduate general education classes and will work with the colleges on campus to ensure that they satisfy breadth requirements for the colleges. Based on the high enrollments in existing general education classes, which are often at capacity, we anticipate that there will be substantial and expanded interest in these classes, particularly in allowing access to larger classrooms and working together with the colleges to advertise them as breadth classes. By offering undergraduate majors in astronomy and astrophysics, as described below, we will expand the opportunities for science and engineering majors and help alleviate the impacted status of some programs.

Research Excellence

Our research and strategic hiring vision is inspired by the interdisciplinary nature of the field, envisioning close collaboration across the university both within the Division of Physical Sciences and beyond. Upon the creation of a department, we plan to immediately initiate discussions with SIO, the Division of Biological Sciences, HDSI, and SDSC to pursue joint research visions supported by faculty hires, aiming to create an environment where both entities value the expertise brought by the other. For example, climate science is a critical topic for understanding both our Earth and exoplanets, and we expect breakthroughs in both fields will be created by researchers with a history of thinking about the other. Looking further ahead, we recognize that cross-divisional astro-engineering is required by forefront researchers in astrophysics and provides excellent training for engineers, with its focus on engineering to requirements that have never before been achieved.
Our research vision centers on excellence in scientific discovery, while providing modern training for the next generation of scientists. We have a simultaneously strategic and opportunistic approach that capitalizes on upcoming astronomical programs commencing in the coming decade. Our research expansion will focus on key areas of current scientific interest that leverage existing strengths on campus, while allowing for updates to our vision as opportunities for excellent faculty hires or new fields of study present themselves. Research excellence is key to visibility and recruitment of the best graduate students, postdoctoral scholars, research scientists, and faculty, and as such this investment will have a positive feedback effect on the entire department.

We see three rapidly growing areas of astrophysics in which, with immediate investment, UC San Diego could have significant impact and lasting leadership:

1. **Exoplanets and Astrobiology.** In the past twenty five years, we have moved from trying to answer the question of whether other stars have planets around them to detecting over 4900 (and counting)\(^3\) extrasolar planets. The diversity of these exoworlds is staggering. We now know that terrestrial planets like our own are common, but the structure and atmospheric properties of these worlds remains a mystery. To emphasize the drastic impact this field has had in such a short time, the 2019 Nobel Prize in Physics was awarded to exoplanet researchers. In the 2020s and 2030s, we will move from the regime of exoplanet discovery into the realm of exoplanet characterization. The newly-launched James Webb Space Telescope (JWST) and the upcoming Roman Space Telescope have exoplanet science as top scientific drivers. Indeed, ~25% of the entire first year of JWST observations have been allocated for exoplanetary science. For the 2030s and 2040s, the community-led NAS Astro2020\(^3\) decadal review recommended a 6-meter flagship space mission with exoplanet science as a key science driver. In particular, the goal of such a space mission is to detect biosignatures, spectroscopic signals from an atmosphere that require biology to explain. In addition, the next generation of ground-based telescopes, including the Thirty Meter Telescope which was also a top priority facility in Astro2020, have exoplanet science at the forefront of their scientific agenda. Before any of these facilities are built, the focus will be on theoretical and laboratory work to define what these biosignatures could be, relying on information from those engaged in Earth geophysics and atmospheric science. Observational astrophysicists and instrumentalists will determine the requirements for observing these signatures and design telescopes, cameras, spectrographs, and spacecraft in order to hunt for these tantalizing fingerprints of life in the universe. The importance of this field in the next several decades cannot be understated. Indeed, the NAS recently convened the first ever panel to determine exclusively a strategy for exoplanet science\(^4\), while simultaneously convening a panel to investigate astrobiology.

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\(^3\) [https://exoplanetarchive.ipac.caltech.edu](https://exoplanetarchive.ipac.caltech.edu)

\(^4\) [https://www.nap.edu/catalog/25187/exoplanet-science-strategy](https://www.nap.edu/catalog/25187/exoplanet-science-strategy)
and the search for life in the universe. UC San Diego has the unique opportunity to be at the forefront of exoplanet evolution, with excellence in this area that crosses departmental and divisional boundaries in Physics, Chemistry, Biology, and at SIO.

(2) **Exploitation of large astronomical data sets.** Coupling data science with astrophysics will be increasingly crucial for discoveries in this next decade and is directly in-line with the NSF 10 Big Ideas of "Harnessing the Data Revolution". Several new observatories and instrumental surveys will come on-line and generate petabytes of data per year, beginning observations in the next few years. At visible wavelengths, the Vera Rubin Observatory will reach first light this fall, and together with the Dark Energy Survey (DES) and Zwicky Transit Factory (ZTF), will produce an enormous wealth of data sets that need advanced processing with unique data science applications. Meanwhile, GAIA has produced its third data release of nearly two billion stars in the Milky Way Galaxy and NASA's TESS satellite has produced enormous amounts of exoplanet data that are now being data-mined, while in the very near term JWST will create and release large data sets on distant galaxies as well as Galactic sources. At millimeter wavelengths, Simons Observatory (SO, with its project office at UC San Diego) is a CMB-stage4 experiment that will generate enormous amounts of data, while newer radio facilities (e.g., CHIME) are identifying hundreds of new transit events. Each of these experiments aims to create thousands to millions of images covering a large fraction of the entire sky over the next several years. Extracting science from these large statistical data sets will require specialists in data science working with astrophysicists. There will be significant breakthroughs in exoplanet discoveries and exploring time-domain astronomy, a rapidly growing field. Astronomical data science is a combination of several growth areas, astrophysical surveys and data science, supported by both the HDSI and the SDSC, and has tremendous interdisciplinary prospects for hiring avenues.

(3) **Multi-Messenger Astronomy.** For the entirety of human history, until the last few years, information about the universe outside of our solar system has come in the form of electromagnetic radiation. We have now detected the first astrophysical neutrinos and gravitational waves from colliding astrophysical bodies. Dare we envision a time when dark matter particle detection provides yet another window onto the universe? We can expect the field of multi-messenger astronomy to expand rapidly and instrumentation for gravitational wave and neutrino astronomy increases in capability, while the large electromagnetic surveys described above produce huge data sets to correlate with the neutrino and gravitational wave signals. Multi-messenger astrophysics relies on cutting-edge instrumentation that uses advances in understanding of the fundamental physics of detection and provides a natural collaboration between astronomy, physics, and engineering both in experimental techniques and theoretical understanding. Lastly, multi-messenger astronomy couples well with data science and advanced data

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5 https://sites.nationalacademies.org/SSB/CurrentProjects/SSB_180812
processing tools from the range of electromagnetic and gravitational wave experiments and has great opportunity for collaboration with HDSI.

Our research vision is supported by our existing research programs, our commitment to a department with a broad and diverse range of expertise, and our strategy to support the most exciting research and innovative people in the field. Growth in our research portfolio in the department will be facilitated by faculty hiring, as described below. It will also be enhanced by broad department support for research scientist appointments, which can attract excellent researchers inspired to focus primarily on research in their careers. There are a relatively large number of researchers in CASS (11 research scientists and 4 postdoctoral researchers), and it is anticipated that they would be associated with the new department. The vision for the Astronomy and Astrophysics department includes strong support for and integration of researchers into the life of the department, from leading colloquia series to serving on departmental committees. Research scientists are an integral part of the scientific vibrancy of the astrophysics group, and we aim to continue to recruit top researchers in the new department.

Strategic Plan for Faculty Hiring

It is anticipated that 14 of the current Physics faculty will transfer to the Astronomy & Astrophysics department (Arnold, Boggs, Burgasser, Coil, Diamond, Holst, Keating, Keres, Konopacky, Murphy, Norman, Sandstrom, Tytler, Wright), with some faculty having joint appointments with both Physics and Astronomy & Astrophysics, as is common at other universities. Faculty with joint appointments will teach in both departments consistent with their % FTE in each department. Initial stated preferences for joint appointments and proposed percentages from the current 14 astrophysics faculty amount to an equivalent of 11 full FTEs shifting to Astronomy & Astrophysics at the creation of the department.

In order to fulfill the teaching needs of the expanded Astronomy and Astrophysics undergraduate courses and new major and minor, we ideally would hire 3 faculty in coming years, in addition to the 14 faculty (11 FTE) transfers mentioned above. These initial hires would be primarily motivated in order to cover the teaching load for the new proposed programs; there are needs at both the undergraduate and graduate levels. (Projected annual course enrollments are given in Appendix C.) Ideally, these initial hires would include one senior hire to increase national visibility of the new department. Long term the department size is envisioned to be similar to astronomy departments at other top universities with at least 20 faculty, some of whom will have joint appointments with other departments. We understand that future hiring allocations will be requested and justified through the normal three-year hiring cycles based on both teaching and research needs. We believe there is substantial room for growth, given the strong interest in the field from both undergraduate and graduate students, as well as from funding agencies and foundations. With strategic investment in a new department at its creation, we can rapidly increase the scientific impact and national and international visibility of
Our program, growing the astrophysics community at UC San Diego both from within and from the outside.

Our near-term hiring plan is based on three fundamental components of this proposal:

- Our research vision to create an impactful department in a position of scientific leadership in astrophysics both nationally and internationally.
- Our need for greater visibility to be able to attract the most innovative and effective graduate students, postdoctoral scholars, research scientists, and faculty.
- Our need for additional faculty to support courses in the new department, engage in the strong undergraduate and graduate research advising component of our program, and to establish a similar size of comparable departments to create a competitive program.

Our faculty hiring process will be supported by aggressive participation in promoting diversity and inclusion through the judicious use of “Excellence Through Diversity” hires.

The near-term hiring plan in the new department, supporting the fundamental components of this proposal, must be ambitious. We plan to have broad searches that will allow us to identify and recruit the most innovative and productive faculty candidates. We will also engage in the necessary work required to proactively advertise for, recruit, and hire the interdisciplinary faculty that we envision. We envision a staggered approach to begin building up the department utilizing existing divisional allocations for astrophysics hires in the current 3-year cycle, and propose for additional growth in the next 3-year cycle. This staggered approach ensures access to a diverse applicant pool, as well as provides time for target of opportunity searches. This will also enable new members of the department to participate in the hiring process and influence strategic directions, particularly for senior faculty hire(s).

As an example, we have outlined a potential hiring plan below for the new department, consistent with the current hiring allocation for Physical Sciences. We envision the hiring plan to be strategically flexible, and it may evolve with the inclusion of new department faculty, rapidly evolving fields, and iteratively with potential divisional retirements and campus resources.

- **Fall 2022:** Utilize existing allocation in the current 3-year hiring plan for a target-of-opportunity spousal hire in exoplanets/astrobiology. If that spousal hire is unsuccessful, then we would request that this FTE be carried over for an open search in AY 2023-24 focused on exoplanets/astrobiology. This search could be explored as a potential joint appointment with SIO, Chemistry & Biochemistry, and/or Biology.

- **AY 2022-23:** Utilize existing allocation in the current 3-year hiring plan for a junior hire focused on exploitation of large data sets, with a strong potential for overlap with HDSI. While this hire was approved for the division as a junior hire, we will continue to work with the dean to advocate for and explore opportunities (such as FTE return from faculty
retirements) to open this search to senior candidates, with an aim of adding significant visibility to the new department.

- Subsequent years: For the remainder of the current 3-year hiring cycle (2021-2024), we will work with the dean in identifying potential opportunities for an additional hire, potentially with a focus on multi-messenger astronomy. We will also work on developing a strategic hiring plan for the next 3-year hiring cycle, based on the teaching and research needs of the department.

### Academic Programs

#### Undergraduate Level

We are proposing a new astronomy and astrophysics undergraduate degree program which has both a BS and a BA major, as well as a minor. The BA degree provides more breadth, as it includes upper division coursework in other departments on campus; this degree is appropriate for students who are interested in a STEM degree and plan to work in education, policy, science communication, or industry. The BS degree provides more depth, as it involves multiple upper division astrophysics courses that will prepare students well for graduate school in astronomy and astrophysics. Both the BA and BS tracks can include an optional honors thesis. Both majors are in alignment with campus degree program policies and the requirements of the undergraduate colleges.

#### Proposed Astronomy and Astrophysics BA Major Requirements

**Lower Division:**

- Phys 2 A-B-C-D or Phys 4 A-B-C-D-E
- 1 programming course from the following: DSC 10, COGS 18, PHYS 39, CSE 5A, CSE 8A, CSE 11, CSE 12, CSE 86
- Math 18 and 20A-B-C-D-E
- Two-quarter astrophysics survey course (ASTR 20A+B)

**Upper Division:**

- 3 courses from this list: ASTR 160, 162, 163, 166
- 1 practical skills course from this list: ASTR 164, 165, 170, 173
- 8 additional upper division courses:
  - At least 4 additional ASTR courses
  - At least 3 upper division courses from other depts: PHYS / SIO / MAE / MATH / DSC / CHEM / BIO / CSE
• Optional: Honors thesis counts as 2 of the 8 additional courses, at least 3 additional ASTR courses and at least 2 courses in other departments

The total credits required for the major are 104 units, 56 in lower division courses (assuming the Phys 4 series) and 48 in upper division courses. This is 7 fewer units than the current Physics major with Astrophysics specialization, which requires 57 upper division units, 9 more than the proposed BA in Astronomy and Astrophysics. We therefore expect the time to degree to be similar, if not slightly less than, the Physics major.

We have verified that students in any of the colleges on campus would have reasonable 4 year plans that fulfill the requirements for their college as well as the major. We note that the Astronomy and Astrophysics BA major has only 1 more lower division course than the current Physics major, and Physics majors are found across all colleges. Specifically, Revelle has the largest number of required courses (the HUM series plus multiple additional breadth requirements). We will propose to Revelle that the ASTR 20A course be allowed to replace the Chemistry GE requirement for our majors, as they will have sufficient breadth and depth within mathematics, physics, and astrophysics, as well as other departments on campus, through the major.

Proposed Astronomy and Astrophysics BS Major Requirements

**Lower Division:**
- Phys 2 A-B-C-D or Phys 4 A-B-C-D-E
- 1 programming course from the following: DSC 10, COGS 18, PHYS 39, CSE 5A, CSE 8A, CSE 11, CSE 12, CSE 86
- Math 18 and 20A-B-C-D-E
- Two-quarter astrophysics survey course (ASTR 20A+B)

**Upper Division:**
- 4 required specific courses: ASTR 101, 102, 103, 104
- 3 required courses from this list: ASTR 160, 162, 163, 166
- 1 practical skills course from list: ASTR 164, 165, 170, 173
- 2 PHYS courses: 130A, 130B
- 3 additional upper division ASTR courses (any of them)
- Optional: Honors thesis counts as 2 of the additional ASTR courses

The lower division course requirements are identical for the BA and BS major tracks. For the BS major the Phys 4 series is recommended but not required. The total credits required for the major are 108 units, 56 in lower division courses (assuming the Phys 4 series) and 52 in upper division courses. This is 3 fewer units than the current Physics major with Astrophysics
specialization; we therefore expect the time to degree to be similar to the Physics major. We have verified that students in any of the colleges on campus would have reasonable 4 year plans that fulfill the requirements for their college as well as the major.

Proposed Astronomy and Astrophysics Minor Requirements

**Lower Division:** same as for the BA or BS major, with the difference that ASTR 20 A+B are recommended but not required

**Upper Division:** 5 ASTR courses

The total credits required for the minor are 68 units, 48 in lower division courses (assuming the Phys 4 series) and 20 in upper division courses. It is expected that many students majoring in physics, engineering, chemistry, and biology, as well as other STEM fields, will fulfill most if not all of the required lower division courses for their majors, such that only the additional upper division courses will be needed for the minor.

This proposed undergraduate program involves 15 new courses that would be created at the start of the department: 4 lower division and 11 upper division courses. 2 of the new lower division courses are GE courses, and 2 are designed for majors. We plan to investigate and potentially create an additional new lower division introductory lab course for majors, which would focus on the fundamentals of optics and electronics as needed to complete the upper division lab courses. We plan to develop this course in the first few years if there are sufficient resources flowing from undergraduate enrollments in ASTR courses and the TA allocation. The proposed new upper division courses align with modern astronomy and astrophysics curricula at other top institutions. Course catalog descriptions for the new proposed undergraduate courses are given in Appendix B, along with a typical course schedule for an undergraduate BA and BS major.

We also propose a new Astronomy and Astrophysics honors program. This will be a senior honors program in which honors students take 8 units of 199H in addition to the above requirements, write a thesis, give a research presentation, and have a GPA of at least 3.3.

For undergraduate students interested in astronomy and astrophysics, the new proposed major would replace the current Physics major with Astrophysics Specialization. Compared to the current Physics major with Astrophysics Specialization (which contains ~117 students or ~28% of the Physics majors), the new proposed Astronomy and Astrophysics major has similar lower division requirements (minus one lab course, Phys 2DL) and in the upper division has between 0 to 3 Physics courses instead of 11 Physics courses, and 8 to 11 ASTR courses instead of 3 in the Physics major with Astrophysics specialization. The new program therefore allows far
greater emphasis on astronomy and astrophysics. There are no other similar undergrad programs on campus. The proposed Astronomy and Astrophysics major also allows students to take either the Phys 2 or 4 series, while the Physics major requires the Phys 4 series. We intend to teach the ASTR courses such that students from either lower division physics track can succeed; this intentional inclusion is important to us and should allow for a greater number of students in the major and more transfer students in particular access to the major. The MATH 20 series is required for the major; in particular, MATH 20C, D, and E are needed for the upper division ASTR courses. Generally, the MATH 20 series is designed for science and engineering majors and is appropriate for the major.

We anticipate that an Astronomy & Astrophysics major will attract more students than the current specialization, up to twice as many if not more, given input that the department has heard from undergraduate students and their strong desire for an astronomy and astrophysics major. Additional considerations are that the A&A major would not be capped, and we intend to intentionally create a welcoming, supportive, inclusive environment in the new department with strong student mentoring and a focus on developing students’ sense of belonging. All of these factors should further increase the number of majors. Given that the Astrophysics specialization already contains ~117 students and that we will offer both a BA and a BS track, we estimate that we will have ~200 majors in the new department, as all of the current Astrophysics specialization students will likely move to the Astronomy and Astrophysics BS track, and we should have a roughly comparable number of new majors in the more general BA track.

**Budget, Staffing, and Space**

It is anticipated that the staffing structure supporting the Center for Astrophysics and Space Sciences (CASS) would make a simple shift to supporting the new Astronomy & Astrophysics Department. This makes sense from both personnel and budgetary perspectives. Since the faculty are already working with the CASS staff, relationships and processes currently exist; there is no reason to reinvent a new structure. Since CASS is an ORU, some elements would be required to augment the staffing in order to support a Department structure. However, this is not anticipated to be significant.

The steady-state staffing is presented below. Positions in black currently exist within CASS and are anticipated to shift to the new department. Those positions are currently supported via IDC return from contract and grant activity in CASS. The positions in red are requested up front to bridge-fund from the startup of the new department until such time as Division Support Model (DSM) metrics provide support for the full positions. It should be noted that the Department Manager/MSO position is normally provided for each department via the DSM. This position currently exists in CASS but is identified here in red since the funding will shift to DSM. AP/HR functions for CASS were previously performed by ORA and Physics. Since the new department and Physics will both be separately funded by the DSM and their own resulting annual budgets, it is expected some funding will shift from Physics to the new department as metrics also shift.
The Physical Sciences Dean’s office can initially absorb AP functions in the new department to help ensure full support until the DSM metrics permit a full position. A bridge-funded HR position in the new department will be necessary not only to handle all payroll and HR functions for staff, researchers, and faculty but also to independently process all graduate student payroll and other funding. A bridge-funded Student Affairs position will be required to handle both the new undergraduate and graduate programs in their entirety.

**Department Manager (MSO/Admin. Ofcr. 4) - supported through DSM**
- Fund Manager (Research Admin. 2)
- Fund Manager (Research Admin. 3)
- Faculty Support/General Admin. (_Asst 3)
- Faculty Support/Chair’s Asst. (_Asst 2)
- Student Affairs (Student Advisor 2) - requested as bridge-funded until DSM supports full position
- HR (Generalist 2) - requested as bridge-funded until DSM supports full position
- AP - functions handled by Dean’s office until DSM supports full position

The Academic Affairs budget model will provide funding for the positions above along with resources to sustain ancillary functions (including IT, consumables, other existing recurring costs). As faculty, majors, and research funding move from Physics to the new department, the Dean’s office will manage any resulting shift in resources.

TA and block grant allocation formulas have been reviewed to align with planned course offerings, expected course enrollments, and graduate admissions.

**Space**

It is anticipated that a 1:1 shift of resources from CASS to the new department would take place, to minimize disruption of current faculty, labs, and operations. Therefore our assumption is that CASS space, including labs, will shift to the new department. An evaluation of this space in light of the new department’s needs should take place upon establishment of the new department, and in close consultation with the EVCAA. Physics will be undergoing a space review in summer of 2022.

**Appendix A: Vision of astrophysics faculty at UC San Diego**

We aim to become a nationally highly-ranked department in astronomy and astrophysics, capitalizing on the unique, cutting-edge resources available at UC San Diego, such as the W. M.
Keck Observatory and San Diego Supercomputer Center (SDSC), to recruit top faculty and students to carry out world-leading research.

For our vision we identified 5 axes to focus on: research excellence, faculty hiring and promotion, graduate curriculum, undergraduate curriculum, and climate and governance. Each of these is described in more detail below.

**Research Excellence:**
Immediate areas identified for research potential and growth are (1) exoplanets and astrobiology (potentially in partnership with Scripps Institution of Oceanography (SIO), Chemistry & Biochemistry, and/or Division of Biological Sciences), (2) astrophysical data science using enormous upcoming astronomical surveys in partnership with SDSC and Halıcıoğlu Data Science Institute (HDSI), and (3) multi-messenger astronomy that includes the time-domain astrophysics and gravitational waves fields. These three exciting research areas both leverage existing campus resources and faculty strengths and allow us to expand in new directions that are quickly growing within the larger astrophysical community.

**Faculty Hiring and Promotion:**
The new Astronomy and Astrophysics Department would allow us to grow through faculty hires, to become a comparable size to top departments at peer institutions. Given the existing resources already available on campus, as well as the strength of our current faculty and research scientists, we can attract and retain top faculty in the field with high visibility.

The new department will provide the basis for a merit review system that promotes and rewards scientific, teaching, and service impact in a transparent and equitable process. Merit reviews of faculty in the new department will aim to:

- Achieve equity in advocating for faculty promotions, ensuring that all faculty are supported.
- Create a merit and promotion process such that it is not incumbent upon the faculty member to ask for their own accelerations.
- Achieve greater transparency in the merit and promotion process, including accelerations, with a vote on all potential accelerations by more senior faculty.
- Establish an active, robust faculty mentoring program within the astronomy and astrophysics faculty.

**Graduate curriculum:**

- Achieve greater autonomy and flexibility in determining requirements and curriculum for graduate-level astrophysics students.
- Broaden the range of graduate level courses offered in astro, to be comparable to other top universities, and have the ability to develop astro-applied courses, such as spectroscopy (i.e., quantum mechanics as applied to astrophysics) or astro-fluids.
- Prepare interested students for careers outside of academia.
• Establish a qualifying exam process that is appropriate to Astronomy & Astrophysics and competitive to other Astrophysics national graduate programs, which includes a research-based or research readiness oral examination.

Undergraduate curriculum:
• Increase flexibility in the undergraduate courses and programs we offer, including both a BA and BS major in astronomy and astrophysics, as well as a minor and an honors program for interested and prepared students.
• Expand our general education presence on campus, with increased enrollments in the current lower division astronomy courses, as introductory astronomy courses have been found to be a useful entry for students interested in science majors.
• Increase the possibility of cross-discipline courses with SIO, Engineering, and Chemistry, as well as the development of a DEI course.
• Promote the involvement of undergraduate students in astronomy and astrophysics research, encouraging interested students to pursue a senior thesis and an honors program. We would also like to promote entry into research at the lower division level, for interested students.

Department climate and governance:
• Create a department climate that is supportive and inclusive for all students, postdoctoral scholars, researchers, staff, and faculty and that appreciates differences.
• Establish and support regular department-wide meetings and discussions on topics such as unconscious bias, imposter syndrome, and stereotype threat.
• Develop a shared governance model by which we encourage graduate students, postdoctoral researchers, and researchers to become involved in the governance of the department.
• Make the research scientist appointment and review process a clear and inviting one to the new department.
• Host undergraduate-focused events to facilitate interactions between the undergraduate students and with the rest of the department.
• Create more common space for faculty and students to interact, as well as an undergrad lounge.
• Establish an annual retreat for faculty for addressing strategic planning and departmental issues.
• Achieve increased transparency and flexibility in how the department is operated, as well as greater inclusivity in governance.
• Establish and monitor fair practices for distribution of space and departmental resources.
• Promote the work and achievements of all members of the astronomy and astrophysics community.
• Establish greater engagement with the greater San Diego community, through supported outreach and development.
Appendix B: Degree Program Details

Undergraduate Program:

Course catalog descriptions for the updates to existing undergraduate courses:

ASTR 7 Galaxies and the Universe  [name change only, no change to existing course description]

ASTR 9 Planetary Systems Near and Far

An exploration of planetary systems in the nearby Universe. Topics include planet formation, gas giants, ice giants, terrestrial worlds (including super Earths), asteroids and comets, moons, and planet habitability. The Solar System will be discussed in the context of our knowledge of other planetary systems. ASTR 5, 7, 9, and 13 form a four-quarter sequence and can be taken individually in any order.

Course catalog descriptions for the new proposed undergraduate courses are:

ASTR 10 Impact of Astronomy on Civilization

Throughout history the mysteries of the night sky have driven humans to pursue a deeper understanding of how the Universe works. This course will examine various ways in which astronomical ideas influenced the development of science and civilization from pre-history to the present day. Topics will include archeoastronomy, the development of timekeeping, celestial navigation, the role of astronomy in cultures throughout the world, including indigenous cultures, and the development of scientific theories of the Universe.

ASTR 15 Astronomy in Science Fiction

This course surveys current topics in astrophysics from the perspective of astronomy in science fiction. The course will consist of readings in selected science fiction novels, watching relevant films, companion readings in an introductory astronomy text, and critical analysis and discussion.

ASTR 20A Introduction to Astrophysics I

This is the first course in a two-quarter sequence of an introduction to astrophysics. This course covers the formation and evolution of stars and their planetary systems. Topics include
telescopes, measuring distances to and masses of stars, thermal radiation and stellar spectra, energy generation in stars, stellar evolution, variable stars, orbital dynamics, the Solar System, planetary atmospheres, and exoplanets.

ASTR 20B Introduction to Astrophysics II

This is the second course in a two-quarter sequence of an introduction to astrophysics. This course covers galaxies and cosmology. Topics include the Milky Way galaxy, star formation and the interstellar medium, galaxies, galaxy evolution, black holes, quasars, dark matter, the expansion of the Universe, large-scale structure, cosmology, the early Universe, and the Big Bang.

ASTR 101 Astrophysical Dynamics

This course covers classical dynamics with an emphasis on astrophysical applications. Topics include: extremization, Lagrangian mechanics, symmetry and conservation, 2-body problem, Kepler’s laws, stellar dynamics: epicycles, Lindblad resonance, virial theorem and applications, coupled oscillators, modes, waves in continua, acoustic waves and Jeans instability.

ASTR 102 Electrodynamics and Optics for Astrophysicists

This course covers electrodynamics and optics with an emphasis on astrophysical applications. Topics include: Maxwell’s equations in vacuum and media, applications; electromagnetic waves, Poynting theorem, waves in media; waveguides, resonators, solution of PDEs by separation; Fermat’s principle, geometrical optics, lenses with introduction to gravitational lensing; physical optics, diffraction (Fresnel and Fraunhofer), and interference.

ASTR 103 Dynamics of Radiation and Fluids

This course covers electromagnetic radiation and topics in fluid dynamics with an emphasis on astrophysical applications. Topics include: special relativity, radiation: multipole expansion, Lienard-Wiechert formulation, radiation from relativistic charges; electromagnetic scattering, topics in radiation processes, introductory fluids, Euler and Navier-Stokes equations, potential flow and induced mass, vorticity, convection and Schwarzchild criterion, and turbulence.

ASTR 104 Thermal Astrophysics

This course covers thermal physics developed from kinetics with an emphasis on astrophysical applications. Topics include: Kinetics-Phase space and distribution, moment quantities, entropy, collisions and Boltzmann equation, H-theorem and approach to equilibrium, fluid equations and transport coefficients, applications to radiation, ensembles: canonical, microcanonical and grand canonical, distributions and relations to thermodynamic quantities, Bose-Einstein and Fermi-Dirac statistics, statistical mechanics with gravity, and applications to compact objects.
ASTR 165  Observational Radio Research Lab

This course will provide students with hands-on experience in radio astronomy through learning the fundamentals of working with common radio astronomy equipment, astronomical observations, and data analysis techniques. The course will teach students fundamental concepts about radio signal receivers and provide hands-on experience in building signal receivers, allowing students to gather their own data. Additionally, students will learn data analysis techniques that are utilized by radio astronomers in interpreting observations.

ASTR 166  Exoplanets

This course will broadly explore topics related to (exo)planetary systems. Topics will include planet detection techniques, planet demographics, planet formation, dynamical interactions and evolution of planet-disk and planet-planet systems, terrestrial planet geology, atmospheres and atmospheric processes, and planetary spectroscopy.

ASTR 167  Astrobiology

Astrobiology is an emerging area of research that incorporates information from a variety of fields including astronomy, planetary science, chemistry, physics, geology, and biology. This course serves as a broad introduction to the field of astrobiology. Topics will include the origin and evolution of life on Earth, climate evolution on pre-biotic Earth, habitability considerations in the Solar System, habitability requirements in exoplanetary systems, signatures of inhabited worlds (including from intelligent life), and philosophical and ethical considerations in the search for life beyond Earth.

ASTR 170  Data Science in Astronomy

This course will introduce statistical and machine learning methods and algorithms frequently used in modern astronomy research. The Python programming language will be used almost exclusively due to its widespread usage in astronomy. The course will use a variety of cutting edge data science tools, techniques, and numerical methods widely used in the astronomy community, with an emphasis on utilizing publicly available codes.

ASTR 171  From the Stars to Earth: Using Nuclear Energy

This course addresses how to obtain energy from the nucleus by fission and fusion and explores the science and technology of nuclear energy and its various applications. Nuclear energy offers a low carbon source of electricity, making it relevant to discussions of climate change. Students will learn how stars and nuclear reactors work and be introduced to the
development of controlled fusion. Topics include fundamentals of nuclei and nuclear physics, energetics of fission and fusion, basics of nuclear reactor design and technology, and elements of the physics of controlled fusion.

ASTR 172  Advanced Observational Optical Research Lab

This course is an advanced research laboratory that develops research skills across a range of astronomical imaging and spectroscopy applications. Students will learn how to analyze and address research challenges that integrate core astronomy curriculum material with state-of-the-art technical coursework. This astronomy lab provides instruction in modern astronomical techniques in acquiring and measuring data to derive fundamental properties of cosmic sources; students will become adept in the use of research methods and tools that form the foundation of modern practical methods in astronomy and astrophysics.

ASTR 173  Computational Astrophysics

This course is an introduction to computational methods in astrophysics. Topics include numerical differentiation and integration, ordinary and partial differential equations, Monte Carlo methods, Fourier transforms, N-body algorithms, and the basics of fluid dynamics and its implementation in grid-based and smoothed-particle hydrodynamics methods. The course will include modern practical applications ranging from planet formation to cosmological structure formation.

A typical course schedule for an Astronomy & Astrophysics Major, B.A.

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
<td>1st year</td>
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<tr>
<td>Math 20A</td>
<td>Physics 4A, Math 20B</td>
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<td>2nd year</td>
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<td>Physics 4C, Math 20D, Astro 20A</td>
<td>Physics 4D, Math 20E, Astro 20B</td>
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<tr>
<td>Astro 160, Astro elective</td>
<td>Astro 163, Astro elective</td>
<td>Astro 162, course in another department</td>
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<td>4th year</td>
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<td></td>
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<tr>
<td>Astro elective, Astro elective</td>
<td>Astro lab, course in another</td>
<td>Astro elective, course in another</td>
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# A typical course schedule for an Astronomy & Astrophysics Major, B.S.

<table>
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<th></th>
<th>Fall Quarter</th>
<th>Winter Quarter</th>
<th>Spring Quarter</th>
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<tbody>
<tr>
<td><strong>1st year</strong></td>
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<td></td>
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</tr>
<tr>
<td>Math 20A</td>
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<td>Physics 4A, Math 20B</td>
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<tr>
<td><strong>2nd year</strong></td>
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<tr>
<td>Physics 4C, Math 20D, Astro 20A</td>
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<td>Physics 4D, Math 20E, Astro 20B</td>
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<tr>
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<td>Astro 102, Astro 163</td>
<td>Astro 103, Astro 162, Physics 130A</td>
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<tr>
<td><strong>4th year</strong></td>
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<td></td>
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</tr>
<tr>
<td>Astro 104, Astro elective, Physics 130B</td>
<td></td>
<td>Astro lab, Astro elective</td>
<td>Astro elective</td>
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This course schedule fits within current 4 year plans for the colleges on campus.

## Appendix C: Projected Course Enrollments

### Estimated Astronomy & Astrophysics Annual Course Enrollments

<table>
<thead>
<tr>
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<td><strong>9</strong></td>
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<td><strong>10</strong></td>
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These numbers are estimated as follows. For the lower division courses, we use the current enrollments to estimate a lower limit for the future. By simply changing the titles of courses from PHYS to ASTR we should increase enrollment immediately, and by working with the colleges to make sure that their academic advisors are aware of these courses and that the courses fulfill GE requirements, we should be able to increase enrollments further. At UCLA and UCB the lower division undergraduate courses routinely have hundreds of students, and we should be able to reach similar numbers here, provided we can have access to large classrooms. The new sophomore level survey course (ASTR 20A+B) is intended for all majors, and the estimated size of the major is used to project enrollments.

<table>
<thead>
<tr>
<th>Course</th>
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<th>Upper Division</th>
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<tr>
<td>20B</td>
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**Upper Division**

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<tr>
<td>173*</td>
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*taught every other year

**TOTAL** 1,480 2,220
For the upper division courses, the current enrollments provide a minimum guide for the future. Of the current Physics majors, 28% are pursuing the specialization in Astrophysics. The current number of astrophysics specializations is ~117. With the new BA and BS majors in Astronomy and Astrophysics we should have closer to 200 majors. This would mean that in a given year around 100 students would take the 160, 161, 162, and 163 courses. The BS majors would take the 101-104 courses, which should be at least 60 students per year. The more specialized upper division courses might have fewer students, with ~40-60 students per year.

At the graduate level, we currently teach 8 courses per year in the Astronomy Graduate Program, with roughly 7-15 students per course. These courses are not included in the table above, which is focused on enrollments in undergraduate courses.
August 9, 2022

SENT VIA EMAIL
EVC Elizabeth Simmons
Office of the Executive Vice Chancellor, Academic Affairs

RE: Recommendation – Department of Astronomy & Astrophysics Proposal

Dear EVC Simmons,

I am very pleased to forward to you the enclosed proposal for establishing a Department of Astronomy and Astrophysics within the School of Physical Sciences at UC San Diego.

In reviewing this proposal from the astronomy faculty to create a new department of Astronomy & Astrophysics, I have consulted widely with all parties involved. I have met on multiple occasions with the Astronomy task force, both before and after the proposal was finalized. I met separately with each of the astronomy faculty members to understand their individual perspectives on the proposal, as well as their personal preferences and recommendations. I have also met with the majority of the Physics Department faculty individually to get their perspective on this proposal. I have consulted with VCR Corinne Peek-Asa with regards to the potential impacts of a new department on CASS. I have also discussed the Astronomy proposal with the previous Physics chair, Brian Maple, and the current chair, Oleg Shpyrko, on multiple occasions to discuss the perspectives and concerns of the Physics Department to this proposal. There are details of course that will have to be resolved in more detail if the new department is approved. Specifically, the future of CASS once a new department is established, as well as the transfer of faculty FTEs from Physics to Astronomy & Astrophysics will have to be phased to minimize the impact of the overall teaching mission within the school. However, none of these details should hold up approval of the department. I have no doubts that, if the new department is approved, these details can be addressed in a fair and equitable manner.

The Astronomy & Astrophysics proposal is scientifically compelling. The astronomy graduate program, which just recruited its first class for Fall 2022, is academically well motivated and long overdue. The caliber of the astronomy and astrophysics faculty at UC San Diego warrants a program that can recruit the best students in astronomy. As a member of UC Observatories, we have access to world-class astronomical facilities that attract world-class faculty and researchers to campus, but we are still underutilizing these resources compared to UC Berkeley, UCLA, and UCSC. Between historical and recent faculty hires in the Physics Department, UC San Diego is well positioned in the emerging intersection of cosmology and fundamental physics. However, there are other emerging areas in astronomy that are worth considering as well, especially the emerging areas of exoplanets and astrobiology. These are highly compelling research areas with significant and growing federal support. These areas are interdisciplinary by nature and are
primarily embraced by astronomy departments and not by physics departments. UC San Diego would be well-positioned to be an international leader in these emerging areas if we were to prioritize and develop a collaborative effort between the astronomy faculty, SIO, Chemistry & Biochemistry, and Biological Sciences. The Astronomy & Astrophysics Department would be well positioned to develop these interdisciplinary collaborations across campus.

In surveying other universities across the country, there are examples of successful astronomy & astrophysics programs housed within physics departments as well as separate astronomy departments. While these programs provide useful structural models for comparison, there does not appear to be a single model for success. However, the proposed new department aligns well with other astronomy departments across UC and would immediately put UC San Diego on the map as a major national force in astronomical research.

One of the most exciting aspects of the proposal is the new undergraduate program proposed, including both a BA and BS major in astronomy & astrophysics. The astronomy faculty have put a lot of careful thought into the design of these undergraduate programs, and their enthusiasm for teaching shows in the breadth and depth of the proposed majors. I anticipate we will see considerable student interest in both majors, as well as for the astronomy general elective courses.

From the resource perspective, our current methodology for managing department resources will be easily applied to the new department. We anticipate reviewing all metrics and shifts in workload and will adjust accordingly over time, in close collaboration with the EVC and VCR offices as needed. Since we have already agreed upon a baseline staffing model for the new department with the EVC’s office, all functional areas will have sufficient support for a ‘startup’ phase. While we cannot today predict exactly how and when other metrics may shift, it is understood that this will be an on-going process over time. We are committed to working through changes as smoothly and collaboratively as possible with all units.

Throughout this process, I have been impressed by the thoughtfulness, vision, and collegiality of the astronomy faculty. These faculty have laid the foundations for a thriving research and educational program in astronomy & astrophysics, as well as creating a department based on fundamental principles of supporting equity, diversity, and inclusion in STEM. I am optimistic that the shared vision of these faculty which has resulted in the proposed Astronomy & Astrophysics Department will result in an amazing future for astronomy research and education at UC San Diego. I give this proposal my absolute strongest support.

Sincerely,

Steven E. Boggs
Dean, School of Physical Sciences
Chancellor's Associates Endowed Chair in Physics

Cc: SAVCAA Robert Continetti
    AVC Marie Carter-Dubois
Steven Boggs, PhD  
Dean, School of Physical Sciences  

Alison Coil, PhD  
Associate Dean and Astronomy Task Force Chair  

August 5, 2022  

Dear Dean Boggs and Dr. Coil,  

Thank you very much for sharing with me the proposal for the establishment of a new Department of Astronomy & Astrophysics within the School of Physical Sciences at UC San Diego. I have read the proposal with interest and discussed it with the leadership of the Center for Astrophysics and Space Sciences (CASS), an Organized Research Unit (ORU) on the General Campus, which reports to the Office of Research Affairs and is evaluated at five-year intervals by the Academic Senate.

The case for standing up an independent Department of Astronomy & Astrophysics is strong. The merits for research, teaching, advancing EDI, and potential for ongoing internal and external engagement were described well in the proposal, setting up the new Department as an opportunity to advance UC San Diego as an institution of excellence. While significant academic reorganizations such as this are complex, the benefits for the areas of physics, astronomy, and astrophysics in the long run seem strong. The new Department of Astronomy & Astrophysics will offer several benefits. It will differentiate our leading reputation in both astronomy and basic physics. It will be a home for new educational opportunities, optimizing potential for both specialized and interdisciplinary studies. Equity in faculty hiring and graduate student admissions and curricula is likely to be enhanced with the creation of the new department. The department will offer a more suitable academic home than a classical physics department to faculty in observational astronomy (a crucial growth opportunity area in which there have been no new hires at UCSD in 8 years), as well as to to pure astronomical theorists. Success in astrophysics research over the last half a decade positions astronomy and astrophysics for even greater growth, once elevated in status to a stand-alone department. In light of the likely increase in federal and commercial funding for space exploration and discovery, and the opportunities to leverage existing telescopes within the state and internationally, great potential exists for a larger Astronomy & Astrophysics faculty size through a new department, and for a larger student body,
being trained for increased job opportunities. The research and educational base offer even more promising opportunities if tied to innovation and entrepreneurship.

As a process of due diligence in transformational changes to ORUs, we have invited and carefully evaluated the concerns related to the placement of the interdisciplinary subject of astrophysics in two departments (Department of Physics and Department of Astronomy & Astrophysics), the fate of research and project scientists currently in CASS, and the future of the business office of CASS. While working carefully to manage the noted risks, with due attention to the needs of those impacted by the creation of the new department, much will be gained by launching the department for the visibility and equity of the faculty, staff, students, and partners interested in affiliating with it.

CASS will be the research incubator of the new department, but it is distinct as an interdisciplinary cross-campus research unit. The highly interdisciplinary nature of CASS, integrating physics, chemistry, engineering, and computer science, should be protected and preserved through structural changes. With CASS’s intellectual center of mass predominantly in Physical Sciences, this is the school in which a continued administration of CASS, in its post-ORU phase, is the most reasonable.

CASS is the academic home to research and project scientists whom I oversee, and I have therefore been particularly interested in making sure that there is a viable academic future for them in the Astronomy & Astrophysics or Physics departments. With his wealth of knowledge of these scientists, whose appointments and promotions he has overseen and supported over many years, CASS director George Fuller has generously assisted my office in evaluating the prospects for a meaningful professional future of these scientists through the departments. I am pleased to know that the specialties of these scientists make the departmental placement for each of them viable, and that the administrative will exists in Physical Sciences to work out any challenges.

As indicated in the proposal, it is expected that the administrative infrastructure of the Department of Astronomy & Astrophysics be chiefly from future research revenue, namely indirect cost recovery, generated through the research portfolio of CASS. Given the interdisciplinary nature of CASS research activity and alignment with both the Astronomy & Astrophysics and Physics departments, some transition period may be helpful to discuss the administrative homes of these grants. There is also a question regarding the continued CASS-Physics arrangement on computational support to researchers and admins in CASS and where activities such as this will be transferred. It has also been brought to my attention that some CASS-affiliated faculty would wish to retain an affiliation with Physics, with implications for their students, the courses they teach, and their research foci. These and similar concerns need to be heard and addressed with the help of the Dean’s office in Physical Sciences. With the interdisciplinary alignment of CASS research in both of the departments, a transitional structure that allows these details to be worked out will be of long-term advantage.

UC San Diego, with our strong research presence in this area, is highly suited to develop a leading Department of Astronomy & Astrophysics, which I support. We have equally strong research in data science and engineering, both of which will be critical areas to accelerate discoveries in space. Our strengths in chemistry, biology, health, and climate science offer
opportunity for new, high-impact collaborations. Few US institutions have the breadth of strengths that can support such interdisciplinary research growth.

Within the Office of Research Affairs, we look forward to continued collaboration with CASS, the Department of Astronomy & Astrophysics, and related research enterprises, and hope to foster and facilitate interdisciplinary science and discovery.

Sincerely,

Corinne Peek-Asa, MPH, PhD
Vice Chancellor for Research
July 1, 2022

Steven Boggs
Dean, School of Physical Sciences

SUBJECT: Endorsement of proposed Department of Astronomy & Astrophysics

Dear Dean Boggs,

I am delighted to offer my endorsement of the proposed Department of Astronomy & Astrophysics. This department has the potential to position UC San Diego as a leader in this field; the area engages in significant ground- (or space-) breaking research; and there appears to be significant student interest.

The proposal is clear and compelling – I would like to highlight a few points that relate to priorities of the Division of Undergraduate Education.

- There is a clear commitment to diversity, equity, and inclusion – both in terms of gender and racialized representation at student, staff, and faculty levels, as well as DEI curricula. The department has the potential to lead in these areas among our STEM disciplines.
- The proposed BA and BS programs are particularly inclusive and should provide exciting new STEM opportunities. This might have a downstream effect of decompressing some of the more impacted undergraduate majors in the school.
- The proposal pays particular attention to general education and the colleges’ curricula. I am sure that the colleges would be eager to partner with the department.
- Finally, the department is uniquely inter-disciplinary and includes work on climate science. Thus, the department should be able to contribute to efforts to establish an undergraduate climate crisis requirement.

I fully support this proposal and look forward to working with this new department.

Sincerely,

John C. Moore
Dean of Undergraduate Education
July 13, 2022

Steven Boggs  
Dean, School of Physical Sciences

Alison Coil  
Associate Dean, School of Physical Sciences  
Astronomy Task Force Chair

Dear Deans Boggs and Coil:

As we know, a task force of faculty has brought forth a proposal to create a new Department of Astronomy & Astrophysics within the School of Physical Sciences. This proposal was the outcome of a process that began in Spring 2019. I have read the proposal and would like to submit this letter of support to be included in the EVC’s submission to the Divisional Senate as it considers the establishment of this new department.

A new Department of Astronomy & Astrophysics would be of great value to our university. The interdisciplinary nature of astronomy and the potential for cross cutting research that the establishment of this new department would offer, will help not only advance important scholarship but will also offer current and prospective graduate students many terrific opportunities to train and engage in the kind of collaborative research that is most needed in these times. The establishment of this new department will also quickly position UC San Diego as a national leader in this important field.

To date, my team has interacted with most every faculty member who will be associated with this prospective new department. I am impressed with the attention these faculty pay to collaborative work, student mentoring, and the recruitment and support of underrepresented students (both women and URM students). In short, the establishment of this new department will be a net positive, in every regard, for our university and, as such, the proposed plan has my full support.

Sincerely yours,

James Antony, Ph.D.  
Dean, The Graduate Division  
Professor in Education  
Affiliate Professor, Rady School of Management
I write to support the School of Physical Sciences’ proposal to form a new Department of Astronomy and Astrophysics. The proposal highlights the long history of astronomy and astrophysics research and teaching at UC San Diego, the outstanding reputations of the faculty in these fields over the years at the University, and the opportunities that will open given the many facilities and assets related to astronomy and astrophysics at the University of California system and other California universities.

I want to highlight the interdisciplinary nature of the fields and the opportunities for collaboration with faculty and Researchers within Scripps Institution of Oceanography (SIO). For example, the study of other planets and their satellites, both within and outside of our solar system, has many dependencies on geophysical methods and technologies used, and in many cases developed, at SIO. Further, most planetary research is informed by our knowledge of the structure of our own planet, of its dynamo and the implications for structural inferences about other planets. Likewise, Earth’s complex history provides insights into interpreting the origin and history of other planets. These areas of study: geophysical methods, techniques, planetary magnetics, geology and geochemistry are areas of great research strength at SIO, offering opportunities for collaboration between SIO and the new department.

In addition, the potential for liquid oceans and life on other planets and their satellites has fostered very exciting collaborations between astronomy and the fields of physical oceanography, marine biology and cryosphere research, all of which are internationally recognized strengths of SIO.

The ability of a new department to attract the best and brightest faculty, researchers and students to astronomy and astrophysics at UC San Diego, to enhance the ability of these individuals to take advantage of impressive new facilities in the US, and to engage in the research being made possible by US investments in the fields is exciting and will certainly lead to new opportunities to collaborate with SIO. We look forward to working with the new department to create a bright future for astronomy and astrophysics at UC San Diego.
Elizabeth Simmons  
Executive Vice Chancellor  

RE: Letter of Support for Establishment of a Department of Astronomy & Astrophysics  

Dear EVC Simmons:

I have carefully read “A Proposal for the Establishment of a Department of Astronomy & Astrophysics at UC San Diego” which was submitted by Alison Coil, Department of Physics on behalf of the Astronomy Task Force (K. Arnold, P. Diamond, M. Holst, D. Keres, Q. Konopacky, K. Sandstrom, S. Wright).

I wholeheartedly agree that astrophysics is, by its nature, an interdisciplinary area of research, since it integrates physics, chemistry, biophysics, geophysics, engineering, computation, and data science to address fundamental questions about the origin, phenomena and processes in the Universe. The study of Astrophysics is unique in that it investigates phenomena over a tremendous range of scales of space, time, and energy, from fundamental particles on subatomic scales to cosmology on scales of billions of light years.

Historically, Astronomy & Astrophysics at UC San Diego has been based in the Organized Research Unit (ORU) of the Center for Astrophysics and Space Sciences (CASS), founded in 1979 by faculty members in the departments of Physics, Electrical Engineering and Computer Sciences, and Chemistry. CASS was founded to provide an institutional framework to strengthen the quality of astrophysics and space sciences education and research at UC San Diego. Since this time, the Department of Mechanical and Aerospace Engineering has also built a relationship with the faculty and mission of CASS.

Indeed, the astronomy faculty have shared research efforts with several extremely active faculty in the Jacobs School of Engineering. These Engineering faculty include Farhat Beg (MAE), Kevin Quest (ECE), Gabriel Rebeiz (ECE), George Tynan (MAE), Dan Sievenpiper (ECE) and Aaron Rosengren (MAE). I understand that the Chairs of MAE (George Tynan) and ECE (Bill Lin) have written letters of support, and I fully endorse these.

Specific areas of mutual interest between MAE and Astronomy & Astrophysics include detector development for astro experimentation efforts, space exploration (i.e, the MAE 180A course on spacecraft guidance), and fusion research, as well as high energy density physics. Areas of mutual interest between CSE and Astronomy & Astrophysics Computer science include the myriad areas of collection, structuring and computation of extremely large data sets, and this
has been a fundamental underpinning of modern Astronomy. Further, ECE houses faculty who are collaborating in the area of radio astronomy, and indeed, many of the first radio astronomers came from electrical engineering backgrounds.

In the case of high energy density physics, I see a strong connection connection with Astronomy & Astrophysics in terms of planets, stars, and compact objects, via interactions with Engineering faculty F. Beg, A. Arefiev, and G. Tynan.

In the case of high energy plasma physics, I see a strong connection with Astronomy & Astrophysics in terms of early universe, CMB, compact objects (incl. AGN jets) via interactions with Engineering faculty A. Arefiev, G. Tynan, F. Beg.

In the case of geophysical fluid dynamics and dynamos, I see a strong connection with Astronomy & Astrophysics in terms of exoplanets, interstellar medium, and stellar magnetism via interactions with Engineering faculty S. Llewellyn-Smith, D. Saintillan, S. Sarkar.

Looking beyond research and at curriculum, I see that the proposed BS in Astronomy & Astrophysics requires students to take upper division courses in other STEM departments, and I’m sure there will be interest in MAE, CSE and ECE courses from the majors.

On the basis of all these considerations, I give my support and endorsement to the Proposal for the Establishment of a Department of Astronomy & Astrophysics at UC San Diego.

Sincerely,

Albert ("Al") P. Pisano
Member, US National Academy of Engineering
Member, US National Academy of Inventors
Walter J. Zable Distinguished Professor & Dean
Irwin and Joan Jacobs School of Engineering
University of California San Diego
July 26, 2022

TO: Steve Boggs  
Dean of Physical Sciences  
MC: 0352

RE: Proposed Establishment of a Department of Astronomy and Astrophysics at UC San Diego

Dear Dean Boggs,

I am writing to express my support for the proposed establishment of a Department of Astronomy and Astrophysics within the School of Physical Sciences at UC San Diego. On review of the proposal, we agree that the department would not negatively impact our School of Biological Sciences, but rather help complement the university. We agree that the new department has potential to provide strong synergies with multiple Schools across campus.

We support and endorse this effort by the Astronomy Tasks Force to establish a new department.

Sincerely,

Kit Pogliano, PhD

CC: Jim Wilhelm, Director of Undergraduate Education
June 15, 2022

TO: Steven Boggs, Dean
School of Physical Sciences

RE: Proposal for a new Department of Astronomy & Astrophysics

I read your faculty proposal for a new Department of Astronomy & Astrophysics with much interest. It was well-written and informative. A few statements in your proposal stood out to me as a reminder of our own experience forming new departments in the School of Social Sciences. Our experiences may be relevant to your efforts. In addition, I am happy to identify areas of collaboration with the Social Sciences, as the new Department plans its course forward. I should say at the start that I enthusiastically support your proposal and I believe it will bring many benefits to UC San Diego.

Our new departments have been formed in two different ways: 1) by cleaving off faculty from existing departments, and 2) by transitioning from program status to department status. Your model is more like the first, and I have come to appreciate the value of changing (and updating) the distribution of intellectual work at a university. Two of our departments, Communication (1983) and Cognitive Science (1986) were formed by a core of faculty who agreed to transfer their appointments to the new department. In the case of Communication, there was an explosion of new research on media systems, the industries that support them and the modes of communication that were altered as a result of the emerging systems. A core of faculty from the Social Sciences and Arts & Humanities formed the fledgling new department, and over time added new faculty to its present strength. Cognitive Science drew its core faculty from JSOE, Arts & Humanities, Biology and Social Sciences. Both of the new departments saw a sharp rise in majors and enrollments a few years after becoming departments. They correctly envisioned shifting intellectual winds which brought their students into a more interdisciplinary framework for studying age-old questions. The new departments were also more diverse in gender and race.

In all 4 cases where we have formed a new department since 1983, there has been a substantial reworking of ideas in Social Sciences. The energy of conceiving something new, trying out different approaches – and hiring new faculty whose work is directly related to the new project – brought rewards to the Social Sciences, including and not limited to: new and larger grants, a new pool of graduate student applications, and opportunities for cross-disciplinary interactions.

The School of Social Sciences would likely contribute to your new department through our data scientists and our computational faculty who have skills in working with large data sets and identifying significance against a background of “noise” (we do a lot of combing through enormous amounts of brain neural activity to discover patterns of language and cognition that are specific to the species). We also have faculty who work in Science Studies, to understand the basis for discovery and paradigmatic shifts in knowledge (especially relevant for what you call a “dirty” speculative subject).

I don’t see a downside to forming this new department, given that there are already such existing departments at peer universities. You have the staff and faculty resources, and there is a plan for adding/funding more in the next few years. I only see an upside.
Congratulations on the effort to put together this proposal, and the Social Sciences stands ready to help in any way we can to help you realize this vision.

With best wishes,

Carol Padden
Dean, School of Social Sciences
To:  Steven Boggs, School of Physical Sciences  
From: Cristina Della Coletta, School of Arts and Humanities  
RE: Establishment of a new Department of Astronomy and Astrophysics  

June 22, 2022

Dear Dean Boggs:

I am pleased to write this letter in strong support of the establishment of a new Department of Astronomy and Astrophysics in the School of Physical Sciences. The time is ripe to capitalize on the illustrious history of research and discovery that has taken place at UC San Diego under the aegis of CASS (Center for Astrophysics and Space Sciences), with its many contributions to astronomical instrumentation, as well as in many areas of theoretical astrophysics. However, the current placement of the Astrophysics group in the larger Department of Physics is not allowing the strategic deployment of resources, build-up of infrastructure, and growth in visibility that would allow UC San Diego to fully realize the potential of a field that is rapidly expanding nationally and internationally.

A new department will help elevate UC San Diego as one of the leading centers for astronomy and astrophysics research and education, and enhance the interdisciplinary approach that lies at the core of research methodologies on our campus. UC San Diego already has 14 faculty members specializing in the fields of astronomy and astrophysics. In fact, as noted in the proposal, “within the UC system, UC San Diego has the largest number of astronomy faculty without having a separate astronomy department or division” (p. 6). Therefore, the new department would not need to be built ex novo, but rather expand on an already solid foundation.

This expansion is justified by the growth in both graduate and undergraduate enrollments in the fields of astronomy and astrophysics, as documented in the proposal. The new department will be well positioned to increase the diversity among both students and faculty by revising existing course offerings, creating new courses, and including targeted support for student mentoring and professional development, as well as EDI-guided training for faculty.

Besides offering both bachelor’s of science and bachelor’s of arts major and minor degrees in astronomy and astrophysics, the new department will provide an important service to our campus by offering undergraduate general education courses benefitting our individual colleges. These courses are currently in high demand. A new department will also enhance the new Ph.D. program in astronomy (launched in 2021) by increasing opportunities to recruit top graduate students that will also benefit from UC San Diego’s telescope and supercomputer access.

The new department will also benefit from synergies with other campus areas, including the San Diego Supercomputer Center, Mechanical and Aerospace Engineering, Electrical and Computer Engineering, Halıcıoğlu Data Science Institute and Scripps Institution of Oceanography, as well as the departments of Physics, Chemistry and Biochemistry.

Cristina Della Coletta  
School of Arts and Humanities  
University of California San Diego · 9500 Gilman Drive #0406 · La Jolla, California 92093-0406  
Tel (858) 534-6270 · Fax (858) 534-0091 · artsandhumanities.ucsd.edu
While collaborations with the School of Arts & Humanities may not be the most obvious, our campus has a history of expansive interdisciplinarity, as demonstrated by the course that Astrophysics Professor Brian Keating and Pulitzer Prize recipient and Literature Professor Rae Armantrout taught together. I hope that similar initiatives could be further developed in the future.

The academic plan for the new department is intellectually sound, clearly articulated and pedagogically innovative. In its interdisciplinary breadth, the plan has the potential to engage with many disciplines on campus, is well align with the research strengths described in our university’s strategic plan, and will create significant opportunities for collaboration across research fields.

I am pleased to offer my full support of this plan.

With best regards,

Cristina Della Coletta

Dean, UC San Diego School of Arts and Humanities
Chancellor’s Associates Professor of Italian Studies
To: Dean Steven Boggs  
School of Physical Sciences  

From: Rajesh K. Gupta  
Director, HDSI  

July 19, 2022  

Dear Dean Boggs,

Thank you for bringing to our attention a proposal for the establishment of a Department of Astronomy and Astrophysics at UC San Diego dated June 8, 2022. I note that the Astronomy Task Force that prepared this proposal includes a member of the Faculty Council of HDSI who has been instrumental in building a bridge to HDSI and the School of Physical Sciences, among the several engagements we have across campus as a hub for Data Science. The proposed transition from CASS as an ORU to an academic department reflects the need for courses and degree programs that would train future talent in the area. Specifically, in the area of astrophysics, data and computer science have a special role in enabling deeper investigations through the lens of computational analysis and causal inference from observed data. Here at HDSI, we have been proud to support design and offering of a graduate course on Statistical Physics of data assimilation and machine learning. We are confident that it is only a start of what could be a series of courses and perhaps joint degree program with physical scientists especially as our students learn methods and tools to understand and advance areas of energy, sustainability and climate.

As a research focused university, we have been proud of a large number of centers and institutes. But it is also true that for a university of its size, UC San Diego has a much less number of academic departments compared to its peers. This “feature” is also becoming a limitation when it comes to translating knowledge advances into creating sustainable programs that can scale to train a talent pool for advances listed under the three areas of growth in astrophysics. Of these, we are naturally interested in the plans for exploitation of large astronomical data sets and look forward to working with researchers in the new department as well as projects such as Simons Observatory for putting
into practice research ideas being pursued by HDSI faculty in data curation, organization, and mining for knowledge.

We are also happy to support proposed plan to suitably direct our approved joint hire with the school of physical sciences in the current 3-year plan towards the new department. We encourage the leadership of the School of Physical Sciences and of the new department to think critically about creating a new MS program, or perhaps a 3+2 BS-MS program, in addition to planned major that will replace the current Physics major with Astrophysics specialization. The experimental and quantitative skills from such a program would find broader use in various professions besides Astrophysics and Space Sciences.

To summarize, HDSI has multiple points of engagements with the School of Physical Sciences through multiple joint faculty appointments as well as planned appointment of new joint faculty. HDSI seeks to strengthen these engagements through a greater inter-departmental engagement and is happy to support a proposal for creating a new department in view of its support from the originating department of Physics and the School of Physical Sciences.

Sincerely,

Rajesh Gupta, PhD
Director, Halıcıoğlu Data Science Institute
Date: June 18th 2022

TO: Steven Boggs, Dean of the School of Physical Sciences
CC: Fritz Leader, MSO SDSC; Shawn Strande, Deputy Director SDSC;
    R. Continetti, Senior Vice Chancellor for Academic Affairs

RE: Letter of Support for the Astronomy & Astrophysics Department

Dear Dean Boggs,

I am excited to provide a letter of support for the creation of an Astronomy & Astrophysics Department at UC San Diego in the School of Physical Sciences.

SDSC is an organization dedicated to “Translation of Innovation into Practice” in the areas of software, computational and data sciences, and related domains. Established 35 years ago as one of the original NSF supercomputer centers, we presently comprise roughly 250 employees with competencies in data science and engineering, research data management, cloud computing, advanced networking, and modern simulation and data analysis techniques across multiple domains, including machine learning. We currently operate 5 sizeable HPC systems, and a system optimized entirely for modern Machine Learning based on the Intel/Habana processors. These systems include in aggregate roughly 200,000 x86 CPU cores and 1,500 GPUs. The total storage infrastructure in the center comprises roughly 100PB. On the networking side, the data center is presently undergoing an upgrade to 400G. As early as this fall, we will support wide area network connectivity at 400G, expanding to Terabit/sec networking in 2023/24. We are thus well positioned to ingest/export and analyze even the largest astronomy datasets being collected today by any instrument on earth or in the sky.

Astronomy & Astrophysics are science drivers on several of our NSF funded computing systems. E.g., our latest $10M+ systems award, the National Research Platform, included DKIST, IceCube, and LIGO as science drivers. The infrastructure will connect Hawaii to a global data federation we operate with hardware deployed on 4 continents today. I personally serve on the LIGO Physics Advisory Committee, and the IceCube Software and Computing Advisory Committee. One of our 5 major HPC systems is funded entirely by the Simons Foundation and is primarily used for astrophysics simulations. Andrea Zonca, the lead of the Scientific Computing Applications Group at SDSC, is an internationally renowned researcher in cosmic microwave background (CMB) radiation, and currently leads the simulation activities in CMB-S4, the next generation experiment to study CMB polarization, expected to be jointly funded by NSF and DOE. The Annual Meeting of the leading current generation CMB experiment, the Simons Observatory, will be physically held at SDSC this summer. SDSC today thus has very substantial scientific engagement with Astronomy & Astrophysics across a wide range of activities.

The research plan described in the proposal for the new department is ambitious, and full of opportunities to further strengthen collaboration with SDSC. I am thus an enthusiastic supporter of the proposed Astronomy & Astrophysics Department, and am looking forward to many more collaborations with the Astronomy & Astrophysics community at UC San Diego, the UC system as a whole, and nationally as well as internationally.

Sincerely,

Dr. Frank Würthwein
Director, San Diego Supercomputer Center
June 21, 2022

Re: Support Letter for a new Department of Astronomy and Astrophysics within the School of Physical Sciences

Dear Deans Boggs and Coil:

As Chair of the Department of Chemistry and Biochemistry, I am writing this letter in strong support of a separate Astronomy and Astrophysics Department within the School of Physical Sciences. I support this new department for several reasons as outlined in more detail below.

First, the field of astronomy and astrophysics is a growing field with even more potential and opportunities in recent years with the discovery of exoplanets and more. This field is no longer just a subset of the field of physics but in fact has its own robust identity as seen by other independent departments at universities throughout the US. Second, there are clearly distinct cultures that have developed within the field of astronomy and astrophysics compared to physics. Because of poorly aligned cultures and vision, this has caused considerable conflict when confined to a single department. Third, given the distinguished faculty at UC San Diego in the field of astronomy and astrophysics, having a separate department will further enhance the reputation of the university in this area.

I also want to reflect on the fact that the Department of Chemistry & Biochemistry at UC San Diego was founded on research areas that align well with this new department. Scientific research areas such as “cosmochemistry” and “origins of life chemistry” established the department with several giants in these fields including Nobel prize winner Harold Urey, first chair of the department John Arnold and Stanley Miller, just to name a few. Several of our best faculty members continue to explore new topics in origins of life chemistry such as Neal Devaraj and Uli Mueller. Additionally, Mark Thiemens’s research program continues to be at the forefront of cosmochemistry and atmospheric chemistry.

Looking toward the future, I see great synergisms with the newly founded Department of Astronomy and Astrophysics and the Department of Chemistry & Biochemistry around areas such as astrochemistry which has recently been designated a sub-division within the Physical Chemistry Division of the American Chemical Society. Astrochemistry research finds a home in a fairly new journal of the American Chemical Society, namely ACS Earth & Space Chemistry. A future joint hire or hires between departments would be beneficial and I hope something that can be explored in the near future.
In summary, I think establishing a distinct Department of Astronomy and Astrophysics within the School of Physical Sciences is a brilliant idea that I wholeheartedly endorse. It will immediately confirm and further establish our university as a top university in this area.

Sincerely yours,

Vicki H. Grassian  
Distinguished Professor and Chair  
Department of Chemistry & Biochemistry
August 9, 2022

Professor Steve Boggs
Dean, Division of Physical Sciences
UCSD

Dear Dean Boggs,

this letter is to confirm the strong support of the mathematics department for the proposal to create the Department of Astronomy and Astrophysics within the School of Physical Sciences.

This is a particularly exciting period for the fields of astronomy and astrophysics, with the 2015 detection of the first gravitational waves by the LIGO detector, the subsequent multi-messenger neutron star collision detections, and most recently with the launch of the James Webb Space Telescope. California has long had a central role in research in these fields, including research at the Lick observatory circa 1870, and with much activity since that time centred in Southern California. These include the construction of major facilities such as the Mount Wilson Observatory, the Palomar Observatory, and the Big Bear Solar Observatory; for decades, these facilities housed some of the largest telescopes in the world. Among the several top tier universities in Southern California that are involved in research in these areas, UCSD faculty play a major, highly-visible role in many national and international astronomy and astrophysics projects involving facilities around the world, in many cases using devices designed and built by UCSD astronomy and astrophysics faculty.

The UCSD faculty working in the fields of astronomy and astrophysics have traditionally had appointments in the Physics Department at UCSD, but there has always been extensive overlap with faculty in both the Chemistry & Biochemistry Department and the Mathematics Department. A number of our most prominent prize-winning chemistry faculty have worked on the origins of life and astrobiology and atmospheric chemistry. Our mathematics department has for decades had faculty working in mathematical and computational physics, with focus areas that include mathematical relativity, numerical relativity, string theory, geometry and topology, all of which have connections to cosmology and gravity. In addition, our computational mathematics faculty have long collaborated with computational astrophysics faculty on the design and operation of the CSME (Computational Science, Mathematics, and Engineering) Doctoral Program. Some of our mathematics faculty are also full members of the ORU known as CASS (Center for Astrophysics and Space Sciences), and continue to make important operational contributions to CASS through service in the CASS Executive Committee and the internal SCRPA (Academic Personnel) Committee.

Some of our mathematical and computational physics faculty served on the Dean’s Task Force for Astronomy and Astrophysics that led to the proposal for a new department, and so we are aware of both the cultural distinctions between astronomy and other areas of physics, as well as the distinct graduate (and undergraduate) training needs that a successful astronomy research and education program requires. Moreover, with the rapidly emerging (and growing) use of data science tools specifically in observational astronomy, a separate department with the ability to design a modern astronomy and astrophysics graduate program that provides training in these tools will allow the department to be nimble enough to adapt to the changing needs of the field.
The department envisages many exciting opportunities for collaboration with the new Department of Astronomy and Astrophysics, including joint work on training students in applied and computational mathematics and data science techniques, as well as potential research and funding collaborations. Lastly, a separate department will also increase the visibility of UCSD in these exciting areas of research.

Yours sincerely,

James McKernan, FRS
Department Chair
Charles Lee Powell Endowed Chair in Mathematics
August 9, 2022

Dear Dean Boggs,

I would like to acknowledge the receipt of the proposal for establishing a new Department of Astronomy and Astrophysics sent on June 10, 2022.

Upon initial review and consultation with several faculty, key staff, and outgoing chairs of relevant departmental committees, it appears that the proposal in its current form presents several potential issues that could have adverse outcomes on the Department of Physics and its mission of research, education, and service.

Therefore, I am establishing a Task Force that will evaluate the full range of impacts the proposed department’s creation will have on curricular development, instructional support, undergraduate and graduate programs, scientific and programmatic planning, ongoing research activities, staffing support, and other crucial functions of the Department of Physics.

The Task Force is expected to start its work early in Fall Quarter 2022 and present its findings to the Chair by the end of the quarter. The Task Force will also present the summary of its report to the departmental faculty at a faculty meeting for open discussion.

As Department Chair, I will make sure that this evaluation is done in a fully transparent and deliberative way, with expert input from individual faculty and staff, relevant departmental committees, as well as experts outside of the Department of Physics.

Sincerely,

Oleg G. Shpyrko
Chair, Department of Physics
June 24, 2022

To: Dean Steven Boggs,
Division of Physical Sciences
University of California San Diego

From: Sarah Gille, Professor and Chair, SIO Department

RE: Support for proposed Department of Astronomy & Astrophysics

I write to offer enthusiastic support from the Department of Scripps Institution of Oceanography for the proposed establishment of a Department of Astronomy & Astrophysics at UC San Diego. Research and teaching objectives in Astronomy & Astrophysics complement SIO’s long-standing research interests in planetary science. The new department will increase the visibility of UC San Diego’s academic offerings that focus on understanding and exploring the universe.

SIO’s undergraduate majors in Geosciences and in Oceanic and Atmospheric Sciences share similar math and physics prerequisites with Astronomy & Astrophysics. SIO course offerings that might be appropriate as approved electives for Astronomy & Astrophysics majors include a broad range of courses that address core areas of planetary science:

- SIO 102. Introduction to Geochemistry (The prerequisite course, SIO 50, can be waived.)
- SIO 103. Introduction to Geophysics (The prerequisite course, SIO 50, can be waived.)
- SIO 128. Microbial Life in Extreme Environments
- SIO 135/SIOG 236. Satellite Remote Sensing
- SIO 155/SIOG 251. Whole Earth Geochemistry
- SIO 177. Fluid Dynamics
- SIO 178. Geophysical Fluid Dynamics

SIO Faculty have identified opportunities for future courses and research collaborations in the areas of astrobiology, cosmochemistry, and planetary atmospheres. The new department will be a natural partner with SIO for potential future joint hires in areas such as Exoplanet and Astrobiological Research.

We look forward to the establishment of the Department of Astronomy & Astrophysics and hope to work with the new department as it establishes its academic offerings.
July 12, 2022

RE: EBE support for Department of Astronomy & Astrophysics

Dear Sir or Madam,

This letter is to convey my support on behalf of the Department of Ecology, Behavior and Evolution (EBE) for the creation of a new Department of Astronomy & Astrophysics within the School of Physical Sciences at UCSD. Organismal biologists within EBE share many intellectual connections with Astronomy and Astrophysics. Astrobiology is the field of evolutionary biology that studies adaptations of organisms to extreme environments (e.g., geothermal, hypersaline, high pressure, low temperatures) on earth that may provide clues to how life might look on other planets. Potential collaborations with colleagues in a new Department of Astronomy & Astrophysics would offer exciting new research directions and avenues for funding. EBE strongly encourages the establishment of the new department to build on existing strengths and create new interdisciplinary research opportunities.

Sincerely,

Jonathan Shurin, Chair
July 14, 2022

To: Steve Boggs (Dean, School of Physical Sciences) and Alison Coil (Associate Dean of Physical Sciences)

Re: New Department of Astronomy and Astrophysics

The Department of Molecular Biology supports with great enthusiasm the proposal for a new Department of Astronomy and Astrophysics within the School of Physical Sciences. Of particular interest to molecular biologists is the field of astrobiology. Areas of common interest include the origin of life on Earth, evolution of unicellular and multicellular life, building habitable environments as well as studies aimed to search for life beyond Earth. This is an exciting area of interdisciplinary research and it seems likely that faculty associated with the Department of Molecular Biology would contribute to ensure that a strong, dynamic research program in astrobiology will develop. The establishment of a new Department of Astronomy and Astrophysics would be a unique opportunity to foster interdisciplinary research involving molecular biologists, teaching undergraduate and graduate classes in astrobiology and supporting outreach programs such as K12 in astrobiology.

Sincerely,

Cornelis Murre
Distinguished Professor
Chair Department of Molecular Biology
July 6, 2022

To:  Steven Boggs, Dean, School of Physical Sciences  
Cc:   Albert P. Pisano, Dean, Jacobs School of Engineering

From:  George R. Tynan, Professor and MAE Department Chair

Subject: Formation of a Department of Astronomy and Astrophysics at UC San Diego

After reviewing the proposal for the possible formation of a new Department of Astronomy and Astrophysics at UC San Diego, I am pleased to write in support. As discussed below, I believe this action would smooth the pathway for increased collaboration between faculty in my department, the larger Jacobs School of Engineering, the new Data Science Institute, and this nascent new department.

My primary motivation for supporting the proposal is motivated by the likelihood that this could enhance collaborative research opportunities for faculty within the MAE Department, where I serve as Department Chair. On the surface, this might seem surprising given the fact that we are an engineering department. However, a look at our department’s history and culture shows that we have deep roots in engineering science - that is to say, in research grounded in the application of basic physics and science to problems that are motivated by application.

This history and culture is expressed in a number of the research activities of present day faculty within the department. For example, some of our faculty study the behavior of matter in extreme conditions such as very high pressures and temperatures using experimental facilities such as high power laser experiments found at the Department of Energy national laboratories. Much of this work is motivated by engineering applications such as ballistics; however, such studies are also relevant to the behavior of matter found in planetary interiors, stars, and so forth, as well as national defense applications. Other faculty within our department carry out laser-plasma and pulsed power
experiments that reproduce the hydrodynamics of astrophysical jets found to be emitted from compact objects (i.e. protostellar objects, white dwarfs and neutron stars, and black holes) in space. Thus there are likely collaborations in laboratory-scaled astrophysical experiments. Finally, we have faculty whose work on ultra-relativistic laser-plasma interactions is connected to the development of novel new compact light sources, but is also relevant to the study of quantum electrodynamics found e.g. near black holes and neutron stars. In a sense, this is somewhat analogous to the collaborative relationship that MAE Faculty have had, and continue to enjoy, with the Scripps Institution of Oceanography, where our faculty work on a wide variety of research topics with SIO colleagues. That work undoubtedly benefits from the long existence and reputation of the SIO; I see no reason why engineering faculty whose work touches on Astronomy and Astrophysics would not benefit from a similar highly visible academic unit on campus.

Looking beyond my department, other engineering faculty with research expertise in extremely sensitive, low noise millimeter wave in microwave detector and amplifier technologies have made and will likely continue to make contributions to the study of cosmological problems such as the primordial cosmic microwave background radiation that pervades the universe as the result of The Big Bang. Given the emergence of new observational facilities that generate massive quantities of raw data, it strikes me as highly likely that collaborations with faculty with expertise in machine learning, artificial intelligence, and data science will also be enhanced by such a department.

Of course, there are probably practical concerns that may arise from such an action, particularly within your own School. However, those concerns lie outside of the scope of my own opinion and view on the subject, and I have to leave it to you and the Administration to judge the merits of these issues and concerns. It seems clear to me, as summarized above, the proposed action would raise the visibility of astronomy and astrophysical research at our campus. That outcome would, in turn, seem to me to raise the possibility of enhanced collaborations between faculty in my own department, within the school of engineering, and the faculty in this nascent new department. As a result, I am pleased to support the proposal.

Should you or the Administration wish to engage in further discussions of this idea, I would be pleased to do so.
Dear Dean Boggs,

I have reviewed the comprehensive proposal for the creation of a new Department of Astronomy and Astrophysics in the School of Physical Sciences at UC San Diego, and I am very pleased to provide my strong and enthusiastic support. Congratulations to the team that put the proposal together for the excellent work. There is a compelling need for this new department in terms of both research and education, and there is clearly already substantial existing investment in facilities to support the current and future Astronomy and Astrophysics faculty and students at UC San Diego. Both Astronomy and Astrophysics are interdisciplinary areas of research that would clearly benefit from being their own department. The proposed new department appears to be well-positioned to capitalize on the research opportunities in the respective fields. In terms of possible connections to my department of Electrical and Computer Engineering, we have substantial research efforts in signal processing and communications theory that have synergistic opportunities with Astronomy and Astrophysics. We look forward to possible collaborations in these areas.

In summary, I look forward to the successful establishment of the new Department of Astronomy and Astrophysics.

Sincerely,

Bill Lin
Professor and Chair
Department of Electrical and Computer Engineering
University of California San Diego

June 23, 2022
July 29, 2022

Dear Dean Boggs,

I have reviewed the proposal for the creation of a new Department of Astronomy and Astrophysics in the School of Physical Sciences at UC San Diego, and I am pleased to provide my strong and enthusiastic support. There is a compelling need for this new department in terms of both research and education. The Department of Computer Science and Engineering has substantial research efforts in Machine Learning, Artificial Intelligence, and Computer Vision, all of which have synergistic opportunities with Astronomy and Astrophysics. We look forward to possible collaborations in these areas.

In summary, I look forward to the successful establishment of the new Department of Astronomy and Astrophysics.

Sorin Lerner
Professor and Chair
Department of Computer Science and Engineering
University of California, San Diego
Dear Nancy,

As a result of a new proposal for establishment of a new Department of Astronomy and Astrophysics, currently under consideration by the Academic Senate (https://senate.ucsd.edu/current-affairs/issues-under-review/department-of-astronomy-astrophysics/) I established a Task Force to provide a careful evaluation of its impacts on Physics Department activities and its mission.

The task force studied the relevant issues and solicited feedback from all faculty as well as relevant staff members.

The resulting report is attached.

Please let me know if you have any questions or concerns,

Oleg Shpyrko
Professor and Chair, Dept. of Physics

cc: Dean Boggs, EVC Simmons

Note from Senate Office (11/21/22): The proposal to establish a new Department of Astronomy was circulated for committee review on September 27th. On November 14th, the Department of Physics submitted a report to Senate Chair Postero, which was prepared by a departmental task force, evaluating impacts of the new Astronomy dept on Physics. The report is attached. EVC Simmons received the report at the same time as Chair Postero. EVC Simmons notified Chair Postero that the report did not undergo administrative review by the EVC’s Office and the discussion of resources expresses the ideas and perspectives of the Department of Physics. EVC Simmons confirmed that the Department of Astronomy and Astrophysics proposal did undergo administrative review prior to submission to the Senate.
Impact of the 2022 Proposal for the Establishment of a Department of Astronomy and Astrophysics on the Department of Physics
Report for Chair Shpyrko

Committee:
R. Averitt, R. Flauger, G. Fuller (Chair), D. Green, T. Moore, B. Noël, A. Yagil

Charge to Committee:
Assess the impact on the Department of Physics (hereafter DP) of the September 15, 2022 proposal to establish an independent Department of Astronomy and Astrophysics (hereafter DA22). Specifically, the committee should assess the impact establishing a Department of Astronomy and Astrophysics (hereafter DA) would have on DP resources, budget and personnel, teaching and students (graduate and undergraduate), faculty hiring, and scientific research effectiveness. The aim of this committee is to investigate each of these areas and provide the Chair and the DP faculty with facts and analysis. This assessment should seek input from the faculty and staff and be carried out in a transparent manner.

Preamble and background:
● There was an earlier (2020) proposal (hereafter DA20) to form a DA. The DP’s response to that proposal is appended to this document (Appendix A) and was developed in close consultation with the proponents of the DA. The DA20’s rationale for a separate graduate/Ph.D. Astronomy Program was sound and was addressed by the establishment of such a program within the DP in a 2021 MOU (Appendix B).

● The 2021 MOU specified a timeframe of three years at which point an assessment was to be made to ascertain if the graduate/Ph.D. Astronomy Program was implemented to the satisfaction of all DP faculty and, in particular, the proponents of that program.

● Circumstances surrounding climate issues were grounds for the Dean to trigger the process that gave rise to the DA22 proposal. In early 2022 the Dean invited discussions with individual DP faculty about this and other issues. Subsequent to that there was little communication between the DA22 task force and DP leadership and astrophysics stakeholder faculty members in the DP.

● This committee hosted a town hall with DP faculty and Dean Boggs. During this town hall, members of the faculty (including faculty who will move to a DA if created) clearly indicated that climate issues were the primary driving force behind the DA22 proposal and the establishment of a DA. Below, this committee provides recommendations (incorporating feedback from all participants provided during the town hall) should the Academic Senate approve the proposal to establish a DA.
Executive Summary:

UCSD has world-leaders in astronomy and astrophysics. These subjects are fundamentally interdisciplinary, cutting across nearly every area and methodology in physics, chemistry, engineering and, likely eventually, aspects of biology. Therefore, it is imperative that, no matter the outcome of the proposal to establish a DA, proactive solutions are sought to advance our world-leading status in both astronomy and astrophysics. The full details of how to achieve this are beyond the scope of the present report. However, addressing critical matters regarding resources, logistics, and collegiality as described in this report are important and necessary steps towards achieving this goal.

- Astrophysics has a strong basis in the Physics department (as in many other Physics departments) and the desire of the DP faculty is to maintain a world-class effort in this area subsequent to the formation of a DA.

- Long term impacts on faculty hiring and FTE in the DP (and a future DA) and other departments within the School of Physical Sciences remain unclear. Additional hires in the DP will likely be needed to make up for the loss of faculty to the DA (in addition to proactively advancing astrophysics in the DP).

- New features in the DA22 include undergraduate DA BS & BA degree programs. Curricular issues are addressed in full below, but there are two core issues of concern for the DP (and a future DA) that should be addressed and resolved between the DP and the DA:
  - The proposed DA22 undergraduate curriculum requires access for DA students to core DP courses at the lower- and upper-division levels without, in some cases, the students having completed appropriate (and longstanding) prerequisites for these courses.
  - The proposed DA undergraduate major may initially be uncapped. Such a STEM major, if uncapped, will attract many students, increasing the burden on core undergraduate DP courses (per the previous point). Thus, it is likely that additional teaching space and instructional resources would be needed for the DP to absorb this encumbrance.

- The initial budgetary and resource impacts of the DA22 on the DP are potentially neutral, since the EVC has committed to providing two years of bridge funding support for the formation of a DA. However, the Center for Astrophysics and Space Sciences (CASS) being absorbed into a new DA would result in the DP losing some staff FTE to the DA. As such, greater administrative burden will be placed on DP staff to support former CASS faculty and researchers wishing to be affiliated with the DP post separation. It is difficult to make a definitive assessment of long-term impacts on the DP as DA22 relies heavily on the assumption that the Divisional Support Model (DSM) will support needed staff in the DA.

- Office space and teaching space impacts require further assessment. A primary issue is office and lab spaces of former CASS faculty and researchers choosing to be affiliated with the DP, since allocations within former CASS spaces in SERF will be at the DA’s discretion.
Recommendations:
A concern expressed by DP faculty was that creation of a separate astronomy department would not bring people together, but rather split practitioners and students of this interdisciplinary enterprise into different departments and administrative units. This could put UC San Diego at a disadvantage in pursuing the many exciting opportunities in astronomy and astrophysics, especially at the interface of physics and astronomy. Consequently, if the Academic Senate approves DA22, we make the following initial recommendations, reflecting the collected feedback this committee received from DP faculty and stakeholders. These recommendations revolve around what would be necessary to ameliorate problems in the areas of teaching, resources, and budget and would craft a framework to mitigate negative consequences that a split might bring to research and student training.

● The task force received feedback from numerous members of the faculty that the title of the proposed department should be “Department of Astronomy”, not “Department of Astronomy and Astrophysics”. The letters of endorsement appended to DA22 from various deans and vice-chancellors seem to reinforce this, with much focus on the strengths of the proposal being squarely in the realm of astronomy.

● A task force consisting of Dean Boggs, leadership of the DP, and the anticipated leaders of the DA should be formed to begin immediate discussions and negotiations over foreseeable challenges in the event the DA is established to preempt issues during a transition.

● All joint appointments (including 0% FTEs) between the DP and the DA require a vote and a signed MOU by both departments and the respective faculty member.

● Additional resources and support should be provided to the DP during the transition, as there will be increased demand on DP staff to share their knowledge and expertise to facilitate a smooth transition in the establishment of the DA.

● It will be important to resolve the question of the disposition of CASS researchers and where their academic appointments will be housed. CASS researchers should be consulted on these issues. A split may require considering the addition of staff FTE to the DP to help support CASS faculty, students, and researchers who wish to be affiliated with the DP subsequent to a split.

● Make several faculty hires in the area of astrophysics in the DP in the near-term to maintain a world-class effort in this area, as well as meet departmental EDI goals for faculty makeup.

● Clarify that:
  ○ To assuage concerns expressed by researchers and faculty currently housed in CASS and the SERF building, no lab or office space in CASS/SERF will be revoked for faculty or researchers affiliated with the DP.
  ○ Graduate application files should be available & moveable between the DA and the DP.
Students admitted by the DA are ultimately the fiduciary responsibility of the DA. Moreover, this should include students currently in the DP who transfer to the DA.

Should a DA be approved, the DP does not anticipate major changes to DP course offerings. Additionally, DP courses have well-defined prerequisites that ensure courses can be taught at the appropriate level. These prerequisites are required of students majoring in physics and for students from other departments. A newly formed DA should be mindful of these longstanding requirements in crafting an undergraduate curriculum. Given the myriad issues associated with courses and teaching, clarity should be established via discussions amongst the recommended task force (above).

1. Scientific Impact

A clear message from faculty at the Town Hall and in individual feedback to this committee was that the DP desires a thriving and competitive astronomy and astrophysics effort at UC San Diego. The question is how to craft a framework for, and organization of, that effort in a way that best facilitates taking advantage of the tremendous opportunities in this field and that is optimal for our students. The DP faculty have expressed the view that only collegiality and open and transparent discussion and give-and-take, with respect for all stakeholders and their funding strategies and requirements, can accomplish this. Some DP faculty have pointed out the advantages (mostly regarding climate issues and in faculty hiring) that an independent DA would bring. Others have emphasized the potential pitfalls and disadvantages to research, students, and collaboration. It is important that all parties recognize the challenges that a split will create, and approach the resolution to these challenges in a sincere and collegial fashion.

The astronomy faculty in the DP are outstanding scientists, among the world’s leaders in the exciting fields of astronomy and astrophysics. In addition, their contributions to the DP’s efforts in addressing teaching and student experience issues have been groundbreaking and outstanding. DP faculty have expressed remorse over their possible departure, but their legacy of excellence will remain in the DP.

DP faculty noted that the DA22 proposal highlighted many important areas of opportunity in astronomy and astrophysics, including the explosion of new instruments, like the anticipated Thirty Meter Telescope, JWST, the Vera C. Rubin Observatory, the Nancy Grace Roman Telescope, and the huge opportunities in exoplanet science, multi-messenger astrophysics, etc. However, other opportunities and research directions were left out of the DA22 that are fundamental to astrophysics research, funding, and student training and recruitment in the DP. These include aspects of cosmology and multi-messenger astrophysics, and nuclear and elementary particle astrophysics. DP faculty expressed a desire that there be respect for the fact that student recruitment and training, and typical funding sources and modalities, can differ significantly between physics and astronomy departments. Our current organization of effort in the DP respects the diverse approaches to astrophysical research. It is important that we make an effort to retain this diversity of approaches should a separation of departments occur.
Community-generated studies and documents (e.g. the Astro2020 Decadal Survey, the Snowmass process white papers, GWIC 3G Science Book) outlining the futures of both astronomy and high energy physics articulate the vital role of astrophysical physics and cosmology to the health of both communities. Cosmology, especially cosmic microwave background studies, dark matter, and multi-messenger astrophysics are vital and important to UC San Diego and the DP.

The Simons Observatory is a key reason why UC San Diego is a world-leading institution in cosmic microwave background (CMB) science. Building on that, DP faculty view CMB-S4 as one of the central projects for future opportunity and growth, especially over the next decade. UC San Diego is fortunate to have three faculty members directly involved in CMB-S4 (Arnold, Flauger, Green) with three more doing closely related work on particle astrophysics and cosmology (Fuller, Keating, Lin). The campus has a unique strength in this important and growing area. The proposed separation of astronomy and physics could split this group between two departments. DP faculty expressed concern that such a split will hamper efforts to recruit and train faculty and students at this important intersection.

Similar concerns have been raised about multi-messenger astrophysics, experimental and theoretical dark matter, and broader cosmology and particle astrophysics efforts at UC San Diego. Experimental high energy physicists (Ni and Yang) in the DP are world leaders in the search for dark matter and some have expressed concern about a split. These fields are important for the future of astronomy and astrophysics at UC San Diego and make facilitation of cooperation and integration between the DP and the DA faculty paramount should a split occur.

Numerous DP faculty expressed concerns about interactions and collaborations between faculty, researchers, and graduate students arising from a split. This issue likely will be exacerbated by the considerable physical separation between the SERF building and Mayer Hall. Graduate students learn from each other, and student interactions across subfields likewise influence faculty collaborations. Such activities may be rendered more challenging by a split. These issues also highlight how essential collaboration and collegial planning will be post split.

2. Equity, Diversity, and Inclusion

Responding faculty made clear that it will be important for the DP to continue to develop its strategies and approaches for attaining EDI goals, while welcoming suggestions and cooperation from a future DA and other departments. It will be important for DA and DP faculty to cooperate on mentoring and advising students from both departments regarding EDI issues and goals. DP faculty noted that the current astronomy and astrophysics group within the DP have been some of the key drivers of the effort to increase diversity and conversations around equity in the DP, both in the faculty and the student body. A separation into two departments will not derail ongoing efforts by the DP to enhance diversity; however, improving the climate, flagged as important by many DP faculty, will be a key aspect of achieving the DP’s EDI goals.
3. **Future Faculty Hiring**

The DA22 includes plans for faculty hiring in many exciting areas, including exoplanets, “big data”, cosmology, gravitational waves, and multi-messenger astrophysics. Some of those areas, the latter three in particular, would likely involve joint appointments, as those areas are dominated by physics, with theorists typically residing in physics departments at most universities. Many of the faculty involved in cosmology, gravitational wave astrophysics, and multi-messenger astrophysics have expressed a strong desire to remain in the DP should a split occur. Moreover, these subjects are potential areas for expansion for the DP. Consequently, there are two issues to address should a split into two departments come to pass.

- Competition between the DP and the DA for faculty positions, at least in the three areas mentioned above. However, faculty slots are limited and the Dean might suggest a joint hire, or a joint appointment could be requested by a faculty candidate.

- We note that joint hires have scientific merit but could be challenging. In this regard, DP faculty feedback received by this committee revolved around two themes: (1) Splitting the departments might disincentivize joint hires at the interdisciplinary borders of astronomy and astrophysics, with each department choosing the “safe” option of hiring in areas where candidates are unlikely to request a joint appointment; and (2) When it comes to joint appointments a split might simply move the competition for positions to the Dean’s level.

4. **Teaching, Courses, and Students (Curricular Issues)**

The proposed DA22 curricula present challenges that the DP and a prospective DA will need to address and resolve. To accomplish this and per the above recommendations, it is suggested that the leaders of the DP and leaders of the future DA meet to discuss all teaching and curricular issues resulting from a split, including those below.

The DP has this objective for undergraduate student education: Provide students with a foundation in basic physics and research tools and with skills to prepare them for graduate school (in any area of physics or physical sciences) or for a career in industry. Its objective for graduate student education is to train the next generation of leaders in research across the subfields represented in the DP. Astrophysics courses and research have played a large role in achieving both of these objectives, and it is expected that they will continue to do so far into the future. Consequently, should they split, the DP and the DA will need to develop and implement strategies that preserve the best curricular opportunities for all students in both departments.

Critical to student education is course availability, which entails a host of logistics issues. These will be exacerbated should a DA be realized. A potential split will create a number of problems that will have to be addressed. These include, but are not limited to, curricular development, prerequisite courses, course duplication, instructional support staffing issues, and the quarter in which courses are offered.
Specific detail on problems, issues, and ramifications is provided below:

- **Curricular issues:**
  - The DA22 proposes duplicating existing DP courses: PHYS 5, 7, 9, 13, 160, 161, 162, 163, 164, 227, 228, 244; PHYA 200, 201, 202, 222, 223, 224, 226, 229, 230, 231, 232, 233, 234, 238, 296, 298, 299. Many of these courses are part of existing undergraduate and graduate curricula in the DP. The DP will need to make an assessment of which of the current courses to continue offering should a DA be established. The DP plans to retain its Physics BS with a Specialization in Astrophysics.
  - Core curricular requirements of the proposed DA22 BS curriculum are Phys 130A-B Quantum Physics. This is appropriate in the opinion of many DP faculty. However, the framing of this requirement in the proposed curriculum is problematic on several fronts. The DA22 curriculum and four-year plan, as it currently stands, will not satisfy the following long-standing prerequisites for PHYS 4C-D-E and PHYS 130A-B as delineated below:
    - **PHYS 4C:** Missing MATH 18
    - **PHYS 4D:** Missing MATH 18, MATH 20E, PHYS 4C
    - **PHYS 4E:** Missing MATH 18, MATH 20E, PHYS 4C, PHYS 4D
    - **PHYS 130A:** Missing MATH 18, MATH 20E, PHYS 4C, PHYS 4D, PHYS 4E, PHYS 100A*, PHYS 110A*
    - **PHYS 130B:** Missing PHYS 100B*, PHYS 130A
  
  *Note: PHYS 100A-B and 110B are not included in the proposed DA22 curriculum but would need to be taken for the purpose of meeting PHYS 130A-B prerequisites.
  - PHYS 130A-B (along with all other core upper-division DP courses) are restricted to DP majors. Once DP majors have been accommodated, students from other departments are considered equally based on available seating and their fulfillment of existing prerequisites.
  - The DA22 proposes the use of a lower-division programming course currently taught under the special topics course number PHYS 39. The DA curriculum should be updated to list PHYS 60, the formal course number for the lower-division programming course the DP will establish. The DP will invite students from all STEM majors to take this course.
  - It is unclear which courses DA students would be encouraged to pursue in the DP for their upper-division restricted electives. As some courses are restricted to DP majors, the DA22 proponents should propose the specific upper-division courses to which they would like DA students to have access so the DP can assess the feasibility of accommodating the request. Likewise, any proposed usage of DP graduate courses in...
DA graduate programs should be proposed and considered by the DP ahead of being included in the curriculum.

- Student Experience:
  - DP students will lose some level of access and priority to join labs and groups of faculty who move to the DA and to the mentorship of these faculty. DP students who are currently assigned as advisees of faculty who would move their appointments—in part or full—to the DA will need to be reassigned appropriately to the remaining DP faculty.
  - Undergraduate students sometimes switch specializations and it is easy to do this within the DP. Moving between departments is a far different proposition. DP students interested in exploring a future DA major will lose the flexibility they currently have if the proposed model is adopted. Students who change to a major in the DA would not be automatically eligible to re-add a major in the DP, as such an action requires an application to the physics capped major.
  - DP faculty expressed deep concerns that the student experience and students’ ability to make informed decisions that are in their best interest will be compromised as a result of the ambiguous nature of the proposed future curricula across the School of Physical Sciences (SPS).
  - Currently, 34% of DP undergraduates are in the PY34 major code, Physics with a Specialization in Astrophysics (roughly 125 students). We do not know how many of these students in the DP would opt to “move” to the DA. Consequently, enrollments in both the DP’s PY34 courses and those of a DA could be impacted.

5. Resources and Budgets

**Faculty FTE:** The DA22 states that an anticipated 11 faculty FTE will shift to a new DA. Feedback from the town hall suggests this number may vary, but we can assume approximately 47.5 FTE would remain in the DP.

Long-term impacts on faculty budgets and FTE in the DP and other departments within the School of Physical Sciences (SPS) remain unclear, but it is assumed that fewer FTE positions will be available in initial years as the DA is established and reaches a critical mass of faculty to support its programmatic goals. Many of the recent DP hires were in the astronomy group (see Appendix A for further detail). A split would at first negatively skew the gender and age distributions of faculty in the DP. This adds impetus to the argument that the DP should receive new faculty positions as soon as possible to meet its EDI goals and teaching and research missions, particularly as they pertain to fundamental physics and astrophysics.
**TA and Student Funding:** With the implementation of the DA22 and until the above recommendations regarding additional DP faculty FTE are realized, the DP will have fewer faculty to cover its teaching of approximately the same number of students (given its considerable effort in service courses for other majors). Utilizing the 2020-21 TA FTE Allocation model, establishment of the DA would result in a neutral to positive impact on the DP TA allocation (net ~2.3 TA FTE) due to the resultant reduction in overall faculty FTE. There is a new TA funding model being rolled out, but we expect it will provide similar outputs. Obviously, this conclusion depends on many current unknowns, including how many majors the DP loses to the DA programs and the University’s ever-evolving graduate funding plans.

It is also necessary to mention that the DP has entered into an MOU with the Division of Graduate Education and Postdoctoral Affairs (GEPA) restricting admissions over the next three years as a result of over-admitting Ph.D. students last year. A consequence of this MOU is that the DP will receive additional financial support for the large recently matriculated cohort of 39 Ph.D. students, but will be expected to “pay back” GEPA in future years by proportionally under-enrolling students. The recently matriculated combined Astronomy and Astrophysics Ph.D. cohort of 16 students is considerably greater (by a factor of two) than the target admissions allocation of eight from last year and represents a significant fraction of the 39 total students in the Fall 2022 cohort. It is assumed that should the DA be established, all of the existing astronomy and astrophysics Ph.D. students would move to the new department. In such a case, the DP would reasonably expect to revisit and redefine the terms of this MOU and that the proportional share of the "loan" from GEPA would be the responsibility of the DA to repay via its own admissions restrictions.

**Staff FTE:** The DA22 suggests that all current staff in CASS are supported via its indirect cost return on contract and grant activity; however, two of those positions are partially supported by the DP for a total of .77 FTE. The DA22 supposes that subsuming the current CASS staffing structure and budget will suffice for most of the functions of a new department and that the researchers currently in CASS will all be appointed in the new DA. Based on feedback received by this committee, it is not clear that this is the case for all, as the researchers include some individuals who are likely to want an affiliation with the DP not the DA. Should CASS be absorbed into a new DA, the DP will lose .77 staff FTE to the DA. Many of the faculty supported by these staff will migrate to the DA along with the .77 FTE, but a number of researchers and some faculty will not, presenting some added administrative burden on the DP’s remaining staff with reduced overall FTE.

Furthermore, some grants will likely move from the CASS Business Office to the DP Business Office, so the IDC projection for the DA based on the CASS model is likely a (modest) overestimate. The fund manager for the Simons Observatory (SO) is currently in the DP and it is unclear what the disposition of SO administrative functions will be should the DA22 be adopted. (Note that currently only the equipment portion of the Simons grant runs through CASS.)

As to the long-term budgeting for a DA that includes the current CASS functions and personnel, we first note that ORA will not support CASS should the DA22 take effect, thereby placing its
funding burden on the SPS. Additionally, the DA22 states that the necessary augmentation of the CASS staffing structure to support a new DA structure is not anticipated to be significant. However, the DA22 then outlines a model in which only 4.33 FTE of the needed 8 FTE for staffing the DA are contained within the existing CASS funding model. As mentioned above, two CASS administrative staff positions are currently supported by the DP for a total of .77 FTE and three new staff positions are outlined in the proposal. During the DP faculty town hall, Dean Boggs confirmed that the EVC has committed to providing two years of bridge funding support for staff positions essential to the formation of a DA.

In summary, if taken at face value, the initial budgetary and resource impacts of the DA22 on the DP could largely be construed as near-neutral. However, it is difficult to make a definitive assessment of long-term impacts as the proposal relies heavily on the assumption that the Divisional Support Model (DSM) will support a necessary four full-time staff in the DA after initial bridge-funding. The DSM provides funding to all departments in the SPS and an additional four staff FTE supported in a DA (some functions of which are duplicative of existing SPS and DP student affairs, human resources, and academic personnel staff positions) has the very real possibility of reducing the staff FTE available to the DP and other departments in SPS as the campus moves toward more efficient staffing structures and a new DSM. (Note: The current DSM is under evaluation by the office of the EVCAA).

**Transitional Staff Effort:** While it is difficult to predict all downstream impacts on existing DP and SPS staff, it is extremely clear that the separation of the current DP into two fully autonomous departments will result in significant short-term turmoil and administrative burden. This is particularly likely for the existing DP, SPS, and CASS staff who retain subject-matter expertise on the academic programs and research areas that will move to a new DA.

Two key impacted areas that are of greatest concern are the DP’s instructional support unit, which supports high-enrollment service and major core courses, and student affairs unit. As outlined above, DP courses will likely have added burdens from greater enrollments, more frequent offerings, and changes to scheduling. This would strain an already overworked instructional support team. Similarly, DP student affairs staff workload will predictably increase to advise a new DA student affairs staff hire and DA students during the (perhaps lengthy) transition period. It would also increase to advise prospective and current students on options and limitations of pursuing a major in the DP versus the DA.

It is the goal and desire of DP to retain the best possible staff and maintain an equitable working environment for them. Should the DA22 be approved, sensitivity and open conversation around added demands placed on DP staff will be essential, else we risk losing excellent employees. Juggling unplanned job duties and added tasks during a transition from one to two departments is not a reasonable option, so additional support and resources to the DP will be necessary to ensure a smooth transition.
6. Space

It is expected that some faculty with offices or lab space in the SERF building may wish to move to Mayer Hall if they retain full appointments in the DP. They may also desire to move their students, postdocs, and research staff. Likewise, some faculty opting for appointments in the DA may desire SERF space. Overall, the net impacts on DP-controlled office space utilization are expected to be manageable.

Concerns about space were expressed by researchers and faculty currently housed in CASS and the SERF building. It is unclear if space in the DP will be needed for Research Scientists currently affiliated with CASS who do not desire affiliation with a DA. Following up on these concerns, this task-force received verbal assurance from Dean Boggs that no lab or office space in CASS will be revoked for faculty or researchers choosing to stay in the DP.

Some Physics classes are currently scheduled in SERF 383 and 329. Should the DA22 be approved, the DP will need to retain access to these spaces in order to fulfill its teaching mission, or receive comparable space assignments from the Office of the Registrar.
A Report by the Physics Department Task Force to Review Proposal for an Independent Astronomy Department

Submitted by

Oleg Shpyrko, Department of Physics, Task Force Committee Chair

On behalf of the Physics Department Task for Review Proposal for an Independent Astronomy Department

Richard Averitt, Pat Diamond, Raphael Flauger, Andrew Meyertholen

March 29, 2020
**Executive Summary:**

The recent Astronomy Task Force report identified several problems within the Physics Department. To mitigate these problems, the task force recommended the establishment of a separate Department of Astronomy and Astrophysics.

Our committee agrees with many of the issues identified in the Astronomy Task Force report. However, we identified several substantive issues in which the proposed resolution would negatively impact the mission of undergraduate and graduate education at UC San Diego and, further, would jeopardize UC San Diego’s reputation, ranking, and competitiveness in several key research areas.

Additionally, the formation of a new department creates a substantial amount of excess administrative workload, without any clear benefits to the educational, scientific or service mission of our campus.

The overall cost-benefit analysis of the proposed new Department of Astronomy and Astrophysics is not favorable in its combined impact on department quality, ranking, collegial environment, and potential for future growth, as well as issues related to students (undergraduate and graduate), faculty, staff and other members of the UC San Diego community.

We identify an alternative solution that addresses the valid concerns raised by the Astronomy Task Force while avoiding many of the disruptions, pitfalls and negative outcomes associated with establishing a new Department of Astronomy and Astrophysics.

Specifically, our committee makes the following recommendations:

- Establish a new Graduate Program in Astronomy – therefore providing our Astrophysics colleagues full autonomy in graduate admissions and curriculum development, as well as raising the visibility for the UC San Diego Astronomy program in regards to rankings, recruitment, and interdisciplinary hires.
- Change the name of our department from "Department of Physics" to "Department of Physics and Astronomy" to reflect the new Astronomy Ph.D. program or specialization track.
- Establish a new position within the Physics Department leadership: Vice-Chair for Astronomy, assigned by the Physics Dept. Chair in consultation with the Physics Advising Committee and the Astrophysics group. The Vice-Chair for Astronomy will assist the Physics Department Chair with assigning and coordinating ad-hoc committees for Astronomy hires and promotions, as well as advising the chair on any issues related to the Astrophysics group and the Astronomy Ph.D. program.
The Composition of the Advisory Committee to the Chair (also known as ABC) should include adequate representation of observational astronomy faculty, to enable active involvement in establishing 3-year hiring plans and other issues facing our department.

Ad-hoc hiring and promotion committees in Astrophysics should be:
(1) Chaired by Astrophysics faculty and
(2) Be composed primarily of Astrophysics faculty, except for one external committee member, as per department rules.

Establish a Committee on Climate in Physics, with a charge to improve collegiality and respect among faculty, faculty and staff, as well as faculty and students. A similar recommendation was also made as part of our recent Graduate Program Review.

Summary of major points:

- The proposed new department leads to duplication of many resources and efforts, yet does not add substantial value to UC San Diego’s educational or scientific mission.
- The duplication of resources and additional financial costs (as well as substantial efforts by our staff and faculty) associated with creating a new department is especially detrimental in view of uncertainties in the financial future of our campus due to the ongoing COVID-19 pandemic.
- The proposed new department does not increase visibility, ranking, competitiveness or reputation of UC San Diego and will in fact make it more difficult to attract top researchers and students in both Astrophysics and related interdisciplinary areas.
- Scientific and programmatic reasons for creating a new department are not well-articulated.
- A model for financial support of graduate students in the proposed department is not well articulated.

**Introduction**

Our Task Force committee, “Physics Department Task Force to Review Proposal for an Independent Astronomy Department” is composed of: Oleg Shpyrko – Chair, Richard Averitt, Raphael Flauger, Patrick Diamond, and Andrew Meyertholen. Our committee was appointed by Physics Department Chair Maple on December 20, 2019, in response to “A Proposal for the Establishment of a Department of Astronomy & Astrophysics” (November 18, 2019) issued by the Astronomy Task Force (Alison Coil - Chair, Kam Arnold, Patrick Diamond, Michael Holst, Dusan Keres, Quinn Konopacky, Karin Sandstrom, Shelley Wright).
Our committee's charge is to “… review the [new Astronomy and Astrophysics Dept] proposal, consider the recommendation and to identify and compare alternative recommendations. Options might include a separate department (as proposed), or a separate section within Physics, or revised departmental policies that might address concerns of the astronomy faculty. The goal is to determine what is best for the physics and astronomy/astrophysics community at UC San Diego in terms of department quality, ranking, collegial environment, and potential for future growth. Please consider the issues as they relate to students (undergraduate and graduate), faculty, staff, as well as the other members of the research community at UCSD.”

Our committee has conducted numerous in-person and phone/Zoom interviews, including meetings with both Astrophysics group members in favor of forming a new Astronomy and Astrophysics (A&A) Department, as well as Astrophysics group members opposed to it. We also met to discuss a variety of related issues with a large number of faculty and staff (both in group settings and one-on-one conversations), to (i) understand the underlying issues that precipitated the proposal to form a separate department, (ii) to obtain opinions from various faculty and staff and, (iii) make our best effort at anticipating the impact the proposed new Department would have on the broader UC San Diego community UC San Diego's visibility and competitiveness.

Based on the Astronomy task force report and our interviews, we identified the following issues that form the basis for the proposal of a new Astronomy and Astrophysics (A&A) Department:

1. Lack of autonomy in Physics Graduate Admissions
Many Astrophysics faculty expressed their frustration with a lack of autonomy in the Graduate Admission Committee process and decision making, and our committee agrees and sympathizes with their frustration.

Many research groups within the Physics Department are likely to have different weights assigned to various Ph.D. candidates file criteria. Furthermore, faculty specializing in either theory or experiment – even within the same research area – are likely to have substantially different selection criteria for Ph.D. candidates for their respective research groups. For example, experimentalists tend to favor research experience and hands-on skills, while theorists tend to favor strong analytical skills and equally strong academic/GRE Physics records.

Considerable discussion in Physics Graduate Admissions revolved around the use of standardized test scores, such as the Physics GRE. There should be flexibility amongst groups (and sub groups) in how standardized test scores are weighted in admissions. Further, the balance of many applicants' file criteria, such as research experience, personal statement, academic record, publications, letters of recommendation, etc. are
not easily codified. We believe that the ultimate decision on the exact balance of these criteria in evaluating admission files is best left to respective research groups since each group ultimately carries the responsibility for advising and supporting these students financially.

Our committee agrees with the basic premise that every research group should have a substantial degree of autonomy in selecting Ph.D. students best suited for the research style in their respective groups. At the same time, we appreciate the counter-argument that students within the same Ph.D. program must have the appropriate level of preparation and skills to guarantee their success in the required core graduate classes, and beyond.

While the creation of a new Astronomy and Astrophysics (A&A) department represents one way to address the issue of autonomy in Graduate Admissions, the same goal is more easily achieved by establishing a new Astronomy Ph.D. program. This has the additional advantage of not creating additional disruption and unnecessary administrative overhead associated with creating an entirely new department.

To address these issues, our committee strongly recommends establishing a new Astronomy Ph.D. program. This would automatically come with independent control over admissions and curriculum development, similar to the successful model provided by the Materials Science Ph.D. program. This program has been operating successfully at UC San Diego for decades, without the need to form a stand-alone Materials Science Department.

An additional advantage of this approach is that establishing a Ph.D. program in Astronomy is likely to serve as a way to establish interdisciplinary ties with faculty outside of Physics, including Chemistry, JSOE, Scripps, etc.

2. Lack of autonomy in the development of the graduate curriculum for students
While all Ph.D. students in the Physics department must share some common knowledge and understanding of fundamental physics, the nature of cutting-edge physics research places an increasing demand on many additional, often specialized, classes in their respective areas of concentration.

Our committee understands and supports the development of several additional courses that are designed primarily for Astronomy and Astrophysics Ph.D. Students. The number of the new Ph.D. classes has to be balanced with an appropriate number of undergraduate classes – for students in the Astrophysics specialization and for other Physics majors, as well as service classes for Engineering and Life Science undergraduates. Currently, among all Physics faculty, about 34% of all classes are taught at the Graduate Level, while the remaining 76% are taught at the Undergraduate Level.
One would expect that the total number of courses taught within the Astrophysics Ph.D. program should retain such a proportion (i.e., 1 part Graduate / 2 parts Undergraduate).

Many members of the Astrophysics group are well-known for their excellence and dedication in teaching at all levels (including service courses such as PHYS 1 and PHYS 2 series), as well as GE courses and upper-division courses. As such, the balance in teaching a wide range of classes is not likely to be a major issue.

Our committee recommends providing autonomy in the development of curriculum for astronomy and astrophysics Ph.D. students. We believe that this is best addressed by creating an independent Astronomy Ph.D. program, rather than forming a new department for reasons discussed below.

3. Climate issues: perception of lack of appreciation of Astrophysics faculty
The most disturbing finding of our committee is that an important contributing factor in forming the strong desire to create a separate and independent Astronomy and Astrophysics (A&A) department is due to an opinion among many Astrophysics faculty members that many of their colleagues outside of the Astrophysics group do not fully appreciate their contributions and efforts – both scientifically, as well as in areas of teaching, service, outreach and mentoring.

While we recognize that climate issues have no simple or short-term fixes, our department must nonetheless begin to address these issues immediately. Indeed, this is an issue to address, independent of the formation of a new A&A department, as climate affects the well-being of the entire department.

We fully acknowledge that this negative perception of our Astrophysics colleagues is not entirely baseless. Nor is it solely limited to attitudes towards the Astrophysics group – the general trend in deteriorating respect and civility among Physics Department faculty, as well as interactions between faculty and staff, or faculty and students, is extremely troubling. The discourse between faculty can at least partially be attributed to the tribal nature of various groups competing for finite campus resources.

However, from our interviews, it appears that the overwhelming majority of Physics faculty members hold in high respect both the scientific stature of our Astrophysics colleagues, as well as the outstanding contributions they make in teaching, outreach, service, and other activities.

We strongly recommend establishing a new “Committee on Climate in Physics” (already in progress) to help define strategies aimed at improving interpersonal and inter-group relationships between faculty, faculty and staff, and faculty and postdocs/students. Structural changes in the way the faculty meetings are run, as well as greater
transparency in key decisions made by department committees and better communication of long-term strategic plans and vision for the Physics Department, are among the issues that may also need to be addressed in this committee. More generally, these changes are also needed to enhance effective self-governance in the department.

4. Perception of lack of new FTEs in areas of Astrophysics
One of the key arguments presented in the Astronomy Task Report is the perception of the lack of new hiring in areas of Astrophysics. Our committee recognizes that this may be true if confined to a very recent (~2-3 years) time frame and limited to a very narrow, specific research area, such as exoplanets. However, taking a medium to long-term approach and considering overall hiring in Astrophysics, the data clearly shows that Astrophysics has not been neglected by Physics and in fact has grown at an extremely healthy rate over this period.

The details of analysis of new hiring trends can depend to a large extent on several parameters, such as – what timescale window is used, as well as which new FTEs should be counted as representative of the Astronomy/Astrophysics field. Nevertheless, our committee does not find any long-range issues regarding hiring in Astrophysics: the data indicates that the Astrophysics group received the largest number of FTEs since 2008, both in absolute and relative terms – more than any other research group in the Physics department.

The table below presents all junior faculty hires in Physics during 2008-2019, with highlighted entries representing hires in Astronomy or Astrophysics. [1]

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Field of Physics</th>
<th>Experiment/ Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>COIL, ALISON L.</td>
<td>ASTRO EXP</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>BURGASSER, ADAM</td>
<td>ASTRO EXP</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>KERES, DUSAN</td>
<td>ASTRO TH</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>MCGREEVY, JOHN AUSTEN</td>
<td>HE TH</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Name</td>
<td>Field</td>
<td>Type</td>
</tr>
<tr>
<td>------</td>
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<td>-------</td>
</tr>
<tr>
<td>2012</td>
<td>JUN, SUCKJOON</td>
<td>BIO</td>
<td>EXP</td>
</tr>
<tr>
<td>2014</td>
<td>BARREIRO GUERRERO, JULIO</td>
<td>AMO</td>
<td>EXP</td>
</tr>
<tr>
<td>2015</td>
<td>KONOPACKY, QUINN</td>
<td>ASTRO</td>
<td>EXP</td>
</tr>
<tr>
<td>2015</td>
<td>PALACCI, JEREMIE</td>
<td>SOFT MATTER</td>
<td>EXP</td>
</tr>
<tr>
<td>2015</td>
<td>WRIGHT, SHELLEY</td>
<td>ASTRO</td>
<td>EXP</td>
</tr>
<tr>
<td>2015</td>
<td>NI, KAIXUAN</td>
<td>HE</td>
<td>EXP</td>
</tr>
<tr>
<td>2015</td>
<td>SANDSTROM, KARIN</td>
<td>ASTRO</td>
<td>EXP</td>
</tr>
<tr>
<td>2016</td>
<td>GROVER, TARUN</td>
<td>CM</td>
<td>TH</td>
</tr>
<tr>
<td>2016</td>
<td>KOSLOVER, ELENA</td>
<td>BIO</td>
<td>TH</td>
</tr>
<tr>
<td>2016</td>
<td>FLAUGER, RAPHAEL</td>
<td>ASTRO/HE</td>
<td>TH</td>
</tr>
<tr>
<td>2016</td>
<td>POPMINTCHEV, TENIO</td>
<td>AMO</td>
<td>EXP</td>
</tr>
<tr>
<td>2016</td>
<td>ARNOLD, KAM</td>
<td>ASTRO</td>
<td>EXP</td>
</tr>
<tr>
<td>2017</td>
<td>FRANO PEREIRA, ALEX</td>
<td>CM</td>
<td>EXP</td>
</tr>
<tr>
<td>2017</td>
<td>GREEN, DANIEL</td>
<td>ASTRO/HE</td>
<td>TH</td>
</tr>
<tr>
<td>2017</td>
<td>LIN, TONGYAN</td>
<td>ASTRO/HE</td>
<td>TH</td>
</tr>
<tr>
<td>2018</td>
<td>YOU, YI-ZHUANG</td>
<td>CM</td>
<td>TH</td>
</tr>
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</table>
Note that for the purpose of this analysis of junior faculty hires, we are excluding 4 L(P)SOEs - Meyertholen, Paddock, Shotwell and Tsai - as well as senior hires: Vergassola (separated), Averitt, Boggs, Simmons and Chivukula, and also excluding 1 junior hire Collins (separated).

2008 to 2015: As the data above shows, from 2008 to 2015, Physics hired 11 new FTEs and the Astrophysics group accounted for 6 out of 11 of those hires.

2016-2019: Since 2016, Astrophysics added 4 new faculty to their roster, including 3 faculty (Flauger, Green, and Lin) who are listed as Astrophysics faculty in the 2019 UCSD Graduate brochure. All three self-identify as Astrophysicists and work in an area that overlaps Astrophysics and Particle Physics, perhaps broadly defined as Cosmology or Astroparticle physics. Some of our Astrophysics colleagues also identify Kaixuan Ni as an Astrophysicist (at least partially).

Our committee went through a careful exercise in making our best effort to properly assign FTEs to a specific area of research. The fact that our accounting disagrees with many of our Astronomy Task Force opinions illustrates the difficulty in assigning strict boundaries to scientific directions that often expand beyond multiple disciplines.

Our committee strongly believes that an important strategic advantage of UC San Diego is being nimble and focusing on new interdisciplinary areas, rather than following the traditional approach of compartmentalizing every faculty hire to a narrow specialization group.

Overall, during 2008 through 2019, the Physics Department has hired 23 new junior faculty members, with Astrophysics accounting for 8.5 FTE, assuming 7 full FTE (Coil, Burgasser, Keres, Konopacky, Sandstrom and Arnold) as well as 3 half-time FTE, assuming 50%/50% split between Astrophysics and Particle Physics for recent hires in Cosmology and Astroparticle physics (Flauger, Lin, and Green). This represents 37% of all new junior hires in the department over 12 years, far more than any of the six conventionally defined research groups within the Physics Department.

In comparison, the Condensed Matter and High Energy groups follow with 5 and 4.5 FTEs over the same period (or 21.7% and 20%, respectively), followed by the Biophysics group and the AMO group with 2 hires each (9%), and zero growth for Plasma (see table below).
The overall outlook does not change dramatically once senior hires and teaching faculty are accounted for – Astrophysics hires still lead by a fairly healthy margin.

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<table>
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</thead>
<tbody>
<tr>
<td>Astro</td>
<td>8.5</td>
<td>37.0%</td>
</tr>
<tr>
<td>High Energy</td>
<td>4.5</td>
<td>19.6%</td>
</tr>
<tr>
<td>Cond. Matter</td>
<td>5</td>
<td>21.7%</td>
</tr>
<tr>
<td>BioPhysics</td>
<td>2</td>
<td>8.7%</td>
</tr>
<tr>
<td>AMO</td>
<td>2</td>
<td>8.7%</td>
</tr>
</tbody>
</table>

Notably, the overall distribution of new FTE has generally not followed a proportional distribution to each research group (i.e., in strict proportion to historic distributions) – and for good reason. The ever-changing landscape of emerging scientific opportunities requires that UC San Diego maintain a nimble approach to remain competitive in its research composition. It should be noted that the growth of the teaching faculty group over the past two years (from zero to four) represents an important development in the shift in Physics Department group distribution that is not addressed in the Astronomy Task Force Report or its analysis of the distribution of our faculty growth.

Our committee recommendation is to avoid arguments in “proportionality counting” of FTEs and instead identify new and emerging fields to take the best advantage of new and exciting scientific opportunities, many of which are likely to be interdisciplinary, spanning across many conventionally defined sub-disciplines.

**Impact on Undergraduate Program and Undergraduate Students**

*Impact on teaching resources within Physics:*  
As a large service department, Physics faculty have a responsibility for educating a wide range of students, including Life Science majors (PHYS 1 series), Engineering majors (PHYS 2 series), non-science/engineering majors (GE classes) as well as Physics majors and Physics Graduate Students. Every year the Physics department educates about 20,000 students, mostly through the large service classes (PHYS 1 and 2 series).

Astrophysics faculty do their fair share in advising and mentoring of undergraduate students, as well as outreach efforts. While many Astrophysics faculty tend to teach classes focused on astrophysics students, the proposed department could result in a net
loss of instructors assigned to at least 9 and as many as 14 Physics classes per year, typically taught by Astrophysics faculty. If a separate A&A department is formed, the Physics Department would need to consider the hiring of 5-7 new junior faculty (since junior faculty typically teach 2 classes per year) to compensate for this loss and be able to maintain the Physics Department teaching load at the current level.

Proposed Undergraduate Astronomy Program:
There is virtually no difference between the proposed Undergraduate (UG) Astronomy Program and the existing UG specialization “Physics with Astrophysics Specialization” bachelor degree. As a result, it is not clear what additional value to our undergraduate education mission creating such a program will provide. At the same time, it will inevitably produce an increased administrative and advising load, including duplication of resources.

For undergraduates in a new Astronomy and Astrophysics Department, the majority of core classes (75-80%+) will need to be taken in another department (Physics). Therefore, in addition to teaching core undergraduate Physics classes, advising, class petitions, curriculum development, and other tasks will still fall heavily on Physics, without appropriate credit in overall major enrollments.

Undergraduate Physics students are often undecided about which specialty degree in Physics to pursue and switch their specializations several times prior to graduation. Since most of the core classes are identical for all specializations, such a change in specialization is essentially effortless. This will no longer be possible for A&A undergraduate students – the students will need to formally request a change of their major from A&A to Physics. This presents a major administrative hurdle and will ultimately make the current Bachelor in Physics with Specialization in Astrophysics degree a more desirable option for many Physics majors interested in astrophysics.

Currently, Physics majors and transfer students have guaranteed seating in core classes, with other majors allowed to enroll if space is available - A&A majors will now compete with various Engineering, Chemistry, etc. majors for the remaining spots in core lower and upper-division PHYS classes.

Creating a separate Undergraduate Astronomy Program will isolate their undergraduate population from the rest of the physics undergraduate students. It will split the undergraduate population interested in Astrophysics and Astronomy into two separate groups – one under the Astronomy degree program and another under Physics degree with Astrophysics specialization. Many undergrads may find the Physics B.S. with Astrophysics specialty more appealing because of the ease of switching specialties within
the physics program, more post-graduation career options, broader networking/advising opportunities arising from interactions with other Physics majors and a large body of Physics faculty, as well as being able to be employed within the Physics Department as paid tutors or graders, especially in the PHYS 1 and PHYS 2 series.

We recommend that Undergraduate Physics and Astrophysics students should remain in the same department and maintain the current curriculum structure, hosted under Physics.

**Impact on Graduate Program and Graduate Students**

Currently, Physics Ph.D. students specializing in Astronomy and Astrophysics take the same core Ph.D. classes as all other Ph.D. students and are subject to the same qualifying exam requirements. In Spring of 2019, the Physics Department changed its Ph.D. qualifying requirements, voting to abolish a two-part qualifying exam and replacing it with a set of 7 core classes (with minimum grade requirements). Additionally, a diagnostic exam was implemented at the beginning of the first year of graduate studies to help incoming students identify their strengths and weaknesses in various areas of Physics. These changes had strong support from the Astronomy and Astrophysics faculty.

During Spring’19, the Physics Department’s Graduate Committee on Educational Policy (Grad CEP) received a proposal to establish a new Astrophysics Ph.D. Degree Track, co-signed by 14 Astrophysics faculty. After lengthy discussions with Grad CEP, the most recent version of the proposal features the addition of 4 new Astrophysics courses to be taught annually, as well as another 6 to be taught bi-annually – resulting in 7 new graduate-level courses. In addition, several PHYS 139/239 specialty topics (such as a Dark Matter course), typically taught once every 2-4 years, will be taught more frequently.

The Grad CEP expected the discussion of a new Astrophysics Ph.D. Degree Track to resume in the Fall of 2019, but this was interrupted by the new Astronomy and Astrophysics Department proposal from the Astronomy Task Force.

We recommend resuming the discussions to consider the option of developing an independent Astronomy Ph.D. Program, as opposed to the Astrophysics Ph.D. Degree Track within Physics Ph.D. program.

An additional issue of concern with the proposed A&A structure is the inadequate Teaching Assistant (TA) support for a small department that lacks a large service class component. Currently (AY 2019-2020) 21 Astrophysics Ph.D. students are supported as TAs in Physics Dept., with just 3 TAs supervised by Astrophysics faculty who wish to
remain in Physics - leaving 18 Ph.D. students that would require full financial support under the proposed new department structure.

A new A&A department would need to come up with a detailed plan, providing financial support for Ph.D. students entering the new department. This support would need to be guaranteed at least for the duration of the Ph.D. student’s 1st and 2nd year while they are taking classes. They would also need to plan to have a “safety net” for supporting students who may be temporarily without an advisor or who may face situations where the source of funding (GSR or scholarship) has abruptly ended.

**Impact on Future Hires and Competitiveness of UC San Diego in Astrophysics**

The UC San Diego Physics Department has undertaken a large investment in the broad area of Cosmology/Astrophysics, with the recent hires of Profs. Raphael Flauger, Daniel Green, and Tongyan Lin, all working on cutting edge questions related to the origins of dark matter and dark energy. This list could also include Kaixuan Ni who is considered (by Astrophysics faculty) as part of the team working at the intersection of Astronomy and Particle Physics. All four of the above faculty were hired in the past 5 years as junior faculty.

Hiring in an area of Cosmology and Astrophysics, including areas related to Dark Energy and Dark Matter, as well as Cosmic Microwave Background Radiation and origins of our universe are unlikely to be successful in the next decade, within a new assumed structure of A&A Dept and Physics Dept. These areas of research are likely to be perceived as too “Astrophysics” to be considered as important areas in the Physics department, while at the same time these areas are also highly unlikely to be considered as a top hiring priority for a new A&A Dept.

As a result, if the new A&A department is formed, UC San Diego is likely to come up short in becoming an important player in the general area of Cosmology and Astrophysics, thereby squandering our recent investments in these interdisciplinary areas.

As our campus moves towards lowering barriers between disciplines and departments and invests heavily in interdisciplinary hires, forming a new A&A department will have the opposite effect, creating artificial boundaries between Astrophysics and Astronomy.

We are also concerned about lack of UC San Diego competitiveness in future areas of collaboration between Astrophysics and Plasma, Astrophysics and Biology (Astro-Biology), Astrophysics and Materials Physics (materials, devices, and detector development, etc.), Astrophysics and machine learning, big data and computational physics, and other potential areas that may emerge in the next few years or decades.
Furthermore, while many future hires in areas related to Astronomy or Astrophysics may express interest in obtaining joint appointments in both Physics and A&A departments, these types of joint hires are unlikely to be successful - making UC San Diego less attractive to those candidates.

Remaining as a single department provides UC San Diego maximum flexibility to respond to newly emerging areas of research related to Astronomy and Astrophysics, which are likely to be in an interdisciplinary sphere.

Creating artificial boundaries between Astronomy and Astrophysics (and other disciplines) will provide other campuses with a substantial competitive advantage over UC San Diego in future hiring in these interdisciplinary areas.

**Impact on UC San Diego Rankings and Reputation**

The proposal for creating the A&A dept will result in two departments, each possibly with lower rankings than the current ranking of the UC San Diego Physics Department. Many ranking metrics are tied to the total number of department faculty, the total number of Ph.D. students, total funding and other “size”-based metrics, all of which will be reduced by about 10-15% relative to current metrics of the Physics Dept.

After being ranked #14 for many years, UC San Diego Physics is currently ranked #17 in US News and World Report and it remains the highest-ranked department in the Division of Physical Sciences (UC San Diego Math Dept is ranked #19 and UC San Diego Chemistry ranked #20 in the nation).

Competition between the top departments in the World (or within the US) is always very tight, and a 10% loss in most metrics can be devastating: a loss of just 5% in Peer Assessment score would result in the precipitous drop of Physics Dept ranking from #17 to #25. A 10% drop in Peer Assessment score will result in Physics ranking plummeting to #44. This will result in a significantly lower appeal for both undergrad and graduate students applying to our programs and in reduced opportunities for our graduates in applying for grad schools or industry/government jobs.

**Impact of COVID-19**

Because of the COVID-19 epidemic, there are many new uncertainties that the campus leadership will need to consider, including a potential economic recession, potential faculty and staff hiring freeze, loss of state funding and federal grant support, lower international student enrollment, accelerated faculty retirements or separations, as well
as sick leave or leave of absence by many of our instructors, staff or students, including time off to take care of their families.

Duplication of many crucially important resources to be distributed across two departments will be hugely detrimental to the overall UC San Diego educational and research mission. Furthermore, the viability of a new A&A department with only a handful (~5-6) of fully committed faculty members and inadequately articulated undergraduate and graduate programs is a highly uncertain and unstable situation, due to the enormous workload of creating a new department falling on the shoulders of just a couple of faculty members.

Even a single separation, sick leave, or a sabbatical could be a devastating blow to the entire proposed A&A Dept concept, wasting many of our educational and research resources at the time our students, staff, and faculty desperately need them.

**Preliminary steps to identify the level of support for the new A&A department**

If the new A&A department is being considered despite the recommendations and the many reservations expressed in this report, our committee suggests the following preliminary steps:

- Any faculty who fully support the concept of A&A department must commit their full 100% FTE to the new department (0% appointments or joint appointments should not be allowed at this stage). Division and Campus leadership can use this response as a true measure of enthusiasm for creating a new A&A department.

- If/when the A&A department is formed, all existing FTEs are allocated 100% to either A&A or Physics according to the commitment above. Once the new department is formed, A&A faculty will be allowed to file requests for joint appointments in Physics, and Physics faculty will be allowed to request joint appointments in A&A Dept. This will assure that all joint appointments are mutually agreed upon by members of both departments.
Appendix B: 2021 MOU

Memorandum of Understanding  
UC San Diego  
Astronomy Graduate Program with  
Department of Physics and  
Division of Physical Sciences

This is a Memorandum of Understanding (MOU) that pertains to the Astronomy Graduate Program (AGP) proposal submitted to the UC San Diego Graduate Division and Academic Senate Graduate Council in December 2020. This MOU addresses issues of governance, resource support, and teaching allocation for an autonomous AGP in the Department of Physics. This MOU is intended to ensure the AGP succeeds in its implementation, and that student educational goals are met within the scope of departmental resources and personnel.

This MOU was established August 1, 2021 and will be effective at the start of the AGP when approved (anticipated approval of the program is Fall quarter 2022). MOU items may be reassessed at the request of only the Dean of Physical Sciences, Physics Chair, and/or Vice-Chair of Astronomy. Any changes to the MOU will be shared with the faculty for consultation and must be approved by all the signatory positions in this MOU.

The MOU components herein directly refer to the submitted AGP proposal. For clarity, the definition of a Principal faculty is a faculty member who will teach AGP courses, advise AGP graduate students, and conduct the majority of service in support of the AGP. The definition of a Participating faculty is a faculty member who is available and interested in teaching AGP courses, and may potentially advise AGP graduate students.

Abbreviations and Acronyms:  
Astronomy Graduate Program (AGP)  
Astronomy Graduate Program Committee (AGPC)  
Graduate Committee on Education Policy (GCEP)  
Graduate Student Researcher (GSR)  
Teaching Assistant (TA)  
Vice Chair for Astronomy (VC-A)  
Vice Chair for Graduate Studies (VC-G)  
Vice Chair for Undergraduate Studies (VC-U)
1. **Governance**

1.1. The Physics Department will support and operate the Astronomy Graduate Program (AGP) once the final proposal is approved by the UC San Diego Graduate Division, UC San Diego Academic Senate, and University of California Office of the President.

1.2. The Vice-Chair of Astronomy (VC-A) will be established with a three-year term as outlined in the position's duties document (Appendix A). The VC-A will aid in the management of the program and interface with the AGP Principal and Participating faculty.

1.2.1. The VC-A should be selected from among the Principal Faculty by the Physics Department Chair.

1.2.2. The VC-A will provide a list of Principal faculty to the Department Chair at least annually to support the department committee selection process.

1.3. The Physics Department Chair, in consultation with the VC-A and Vice-Chair of Graduate Studies (VC-G), will establish an annual Astronomy Graduate Program Committee (AGPC), as defined in the AGP proposal, that will manage and assess the AGP.

1.3.1. The chair of the AGPC should be the VC-A or one of the Principal or Participating faculty members of AGP.

1.3.2. The majority of the AGPC members should be drawn from AGP Principal or Participating faculty members.

1.4. The AGPC will manage the AGP course requirements (AGP courses have a designation of PHYA), curriculum content, approval process, and overall program management. See Section 4.0 for details on consultation with Physics CEP committees.

1.4.1. Service on the AGPC will be considered a departmental service activity for merit/promotion review and will be coordinated and balanced with other Physics committee service.

1.5. The AGPC will coordinate with the Graduate Committee on Education Policy (GCEP) and Undergraduate Committee on Education Policy on any future cross-listed or new PHYA courses that are beyond the established AGP proposal curricula.

1.5.1. The VC-G will serve as an ex-officio member on the AGPC and the VC-A (or the AGPC chair) will serve as an ex-officio member on the GCEP. The ex-officio members are expected to report back regularly to their committees.

1.6. Any governance or management issues involving the AGP that need mediation or conflict resolution (that is outside or not foreseen in this MOU) will be addressed by both the VC-A and Physics Department Chair. If necessary, the Physics Department Chair with the VC-A will bring high-level issues that need further input and counsel to the Dean of Physical Sciences.
2. Faculty Teaching Resources
   2.1. The teaching load for Principal and Participating faculty will remain commensurate with other Physics faculty.
   2.2. The fraction of topic-specific graduate courses, including AGP graduate courses, taught by Principal and Participating faculty should be commensurate with other Physics faculty, averaged over three years.

3. Departmental Staff Resources
   3.1. Administration of the AGP will be supported by Physics Department staff.
       3.1.1. Anticipated duties of the Physics Department staff include graduate student advising, administration of the qualifying exam, administration of the advancement to candidacy exams, administration of the thesis defense, admissions support, TA assignment, course scheduling, and classroom assignment.
   3.2. The AGPC will provide the necessary documentation and instruction for AGP graduate student requirements and administrative paperwork to the Physics staff.

4. Departmental Course Support
   4.1. Once the AGP proposal is approved, Physics Department staff will change the course designations (e.g., change PHYS 223 to PHYA 223) and establish cross-listed courses (e.g., add PHYA 227 as cross-listed with PHYS 227), as described in the AGP proposal following official UCSD and Physics departmental processes.
       4.1.1. The courses requiring a change in designation are PHYA 223 (Stellar Astrophysics), PHYA 224 (Physics of Interstellar Medium), PHYA 226 (Galaxies), PHYA 229 (Astronomical Instrumentation), and PHYA 238 (Observational Astrophysics)
       4.1.2. The courses requiring an addition of a cross-listed designation are PHYS 227/PHYA 227 (Cosmology), PHYS 228/PHYA 228 (Compact Objects), PHYS 253/PHYA 253 (Astrophysics and Space Physics Seminar), PHYS 258/PHYA 258 (Astrophysics and Space Physics Special Topics Seminar), and PHYS 500/PHYA 500 (Teaching Instruction).
   4.2. Once the AGP proposal is approved, the Physics Department staff will submit course approvals for the new “core” and "research” course designations in the first year of the program, as described in the AGP proposal following official UCSD and Physics departmental processes.
       4.2.1. The new core A and B courses requiring establishment as new designations are PHYA 200 (Survey of Astrophysics), PHYA 201 (Radiative Processes in Astrophysics), PHYA 202 (Astrophysical Fluid Dynamics), and PHYA 222 (Planets & Exoplanets)
4.2.2. The new research courses requiring establishment as new designations are PHYA 298 (Directed Study in Astronomy) and PHYA 299 (Dissertation Research in Astronomy).

4.3. Once the AGP proposal is approved, the Physics Department staff will assist in the establishment of at least four new “elective” PHYA courses over the subsequent three (3) years, as defined in the AGP proposal following official UCSD processes.

4.3.1. The new elective classes requiring establishment as new designations are PHYA 230 (Computational Astrophysics), PHYA 231 (Astrophysical Kinetics), PHYA 232 (Astrostatistics), PHYA 233 (Astrophysical Dynamics), and PHYA 234 (Astrophysical Plasmas).

4.3.2. New elective courses that are established are expected to be taught only once every 2-3 years to satisfy both AGP degree requirements and teaching load expectations.

4.3.3. The Physics GCEP in consultation with the VC-G and VC-A will consider whether PHYA courses, that are not cross-listed with PHYS, are included as an elective that satisfies the Physics Ph.D. program requirements.

4.4. Subsequent introduction of any additional courses into the AGP beyond those described in the AGP proposal will follow a parallel process as new Physics courses, with initial evaluation by the AGP for Astronomy courses and initial evaluation by the GCEP for Physics courses (and UCEP for courses that contain UG component). Final approval will be made jointly by the VC-A and VC-G.

4.4.1. If mediation is required in the course approval process, the official path of appeal is with the Physics Department Chair.

5. Astronomy Graduate Admissions

5.1. Physics Department staff will support graduate admissions for the AGP in accordance with Graduate Division requirements by organizing applicant files, aiding in Fellowship selection and attending AGP graduate admissions meetings.

5.2. The allocation of annually accepted students into the AGP will be determined by the same process as accepted students in other Physics research areas.

5.2.1. Allocation of accepted students into the AGP will be based on the current AGP graduate student population, anticipated annual graduate student research (GSR) support among Principal and Participating faculty, teaching assistant resources, and block grant funds, as commensurate with other Physics research areas.

5.2.2. Physics faculty will designate each year the pool of applicants they anticipate to draw from the Physics and/or Astronomy Graduate Program.

5.2.3. If necessary, allocations between the AGP and Physics graduate program may be revisited by the chairs of both admissions committees and the Physics Chair & MSO based on the applicant pool and GSR allocation and requests.

5.2.4. The AGP allocation process will be adjusted to align with future changes in the Physics allocation process.
5.3. To coordinate Astronomy and Physics admissions, chairs of each admissions committee will participate as *ex-officio* members on the other committee. This process is intended to identify applicants that should be considered for transfer between the Astronomy and Physics programs. This process is also intended to aid in selecting fellowship applicants.

5.4. The Physics Department staff will support transferring applicant files between the AGP and Physics graduate programs, as needed. Transfer of applicant files will follow Graduate Division Policies for contacting the prospective student(s) and must be approved by both Astronomy and Physics admissions committees.

5.4.1. The procedures for transferring applicant files will follow the guidelines established by the Graduate Division.

5.5. AGP admitted students are eligible to be nominated for specialized fellowship applications offered to the Physics Department (e.g., Katzin, San Diego, Cota Robles, SEED, Sloan) through the Graduate Division.

5.5.1. AGP candidate fellowship applicants will be nominated by the AGP admissions committee and will be included in the Physics fellowship candidate pool and selection process.

5.5.2. The AGP graduate admissions committee chair and one AGP graduate admissions committee member will serve as voting members on the fellowship application selection process in conjunction with the Physics graduate admissions committee. This requirement is to ensure that AGP representative(s) participate in the fellowship selection process.

5.6. AGP admitted students are eligible for signing bonuses or any other recruitment funding commensurate with Physics admitted students.

5.7. The AGP and Physics graduate program admissions chairs and committees will coordinate open house activities and prioritize that these activities occur at the same time.

6. **Graduate Student Requirements & Support**

6.1. Enrolled Astronomy or Physics graduate students must complete the designated requirements for their admitted graduate program.

6.2. If a graduate student wants to receive their degree in another UC San Diego Ph.D. program, then the student must follow the Graduate Division guidelines for transferring to a different Ph.D. program.

6.2.1. The student will need to receive supporting documentation from the program they intend to transfer into.

6.2.2. If the transfer is accepted, the student will need to satisfy the degree requirements for the program they have transferred into.

6.3. The AGP will follow the graduate Teaching Assistant (TA) and Graduate Student Researcher (GSR) allocation and resource guidelines that are in place in the Physics Department in any given year.

6.3.1. TA allocations will be commensurate with other research areas in the Physics Department.
6.3.2. Any guarantee of graduate student support in the Physics graduate program will be granted commensurately to AGP graduate students.

6.4. AGP graduate students are allowed to TA undergraduate PHYS courses, with a prioritization for astronomy-based undergraduate courses.

6.5. Enrolled Astronomy or Physics graduate students may conduct research in any area, but must complete the defined graduate program requirements for their admitted degree program.

6.5.1. AGP students intending to conduct research with an advisor who is not a Principal or Participating faculty must obtain a supporting letter from their intended faculty advisor, whether in Physics or another Department. This letter of support should indicate the advisor’s awareness of the AGP program requirements and a commitment to the student’s mentoring and support. The letter will be sent to the AGPC, GCEP, and graduate coordinator (Physics Student Affairs) for student file documentation. This procedure is to ensure graduate student support, tracking, proper mentorship, and appropriate professional development.

6.6. Regardless of the department of their faculty thesis advisor, a graduate student’s completed Ph.D. degree will reflect their admitted graduate program, unless a formal transfer has been approved.

7. Communication & Assessment

7.1. The Physics Department and Division of Physical Sciences will support and advertise the AGP on the Physics Department webpages and through national outlets for graduate degree program advertisement and recruitment.

7.1.1. The AGPC will assist in the development of an AGP webpage and other advertisement and recruitment materials.

7.2. The AGP will nominally be evaluated as part of the current 7-year Graduate and Undergraduate program evaluation cycle for the Physics Department by the Graduate Council of the Academic Senate.

7.2.1. During these evaluations, the Physics Department Chair and VC-A will ensure that at least one member of the external review committee is a Principal or Participating faculty and can provide specific feedback on the AGP.
Signatories:

Vice Chair for Astronomy
Physics Department
UC San Diego
Associate Professor Shelley Wright

Vice Chair for Graduate Studies
Physics Department
UC San Diego
Professor Rick Averitt

Vice Chair for Undergraduate Studies
Physics Department
UC San Diego
Professor Oleg Shyprko

Management Service Officer
Physics Department
UC San Diego
Thomas Tomp

Chair
Physics Department
UC San Diego
Distinguished Professor Brian Maple

Dean
Division of Physical Sciences
UC San Diego
Professor Steven Boggs
Appendix A: Vice-Chair for Astronomy Responsibilities and Duties

For reference the 2020-2021 responsibility & duties document was defined by the Physics Chair in September 2020.

- Facilitate and coordinate the implementation of the Dean’s Recommendation submitted to EVC and Physics Department Chair on July 9, 2020.
  - Advise the Dept. Chair on composition of a committee for oversight on implementation plan described in the Physics ‘Astro Measures’ document.
  - Report to the Dept. Chair on milestone status and assist with recommendations on matter related to Physics ‘Astro Measures’ document.
- Facilitate and coordinate the development of a new graduate program in Astronomy.
  - Advise the Dept. Chair on selection of representatives to work with the department vice chairs on developing the grad program in astronomy.
  - Assist the Dept. Chair and astronomy group with the coordination and implementation of an astronomy graduate program.
- Assist the Department Chair in assigning and coordinating departmental ad hoc committees for astronomy faculty for their annual reviews / promotions.
- Assist the Department Chair in assigning any potential Faculty search committees that are related to astronomy/astrophysics.
- Provide input to the Department Chair and to the Department Academic Personnel Committee on any AGP Principal faculty reviews (that are not senior to the VC-A).
- Serve on the Physics Department Advisory Committee.
- Assist the Vice Chair(s) for Graduate and Undergraduate studies in teaching assignments and issues related to course curricula and classes in Astronomy.
- Serve as the primary means of communication with the astronomy group.
  - Advise the Department Chair on issues related to the group and strategic planning in astronomy.
  - Assist with any input and feedback needed for the Multi-campus Research Unit, UC Observatories.
  - Meet and assist with the UC San Diego Undergraduate Astrophysics specialization majors and astronomy-related student groups at least once per year.
- Work with the CASS Director to support astronomy/astrophysics research and its community.
- Assist the Department Chair and CASS Director with letters of support for Postdoctoral Prize Fellow (e.g., Hubble, Einstein, Sagan) applicants.
Dear Senate Chair Postero,

Attached is a brief response from the Astronomy Task Force to the "Impact of the 2022 Proposal for the Establishment of a Department of Astronomy & Astrophysics on the Department of Physics Report" that was recently submitted to the Academic Senate by the Physics Department. We look forward to receiving the Senate’s questions and comments on our Astronomy & Astrophysics Department proposal later this month; please let us know if you have any questions or concerns in the meantime.

Thank you very much,
Alison Coil, on behalf of the Astronomy Task Force
November 22, 2022

From the Astronomy Task Force: Kam Arnold, Patrick Diamond, Michael Holst, Dusan Keres, Quinn Konopacky, Karin Sandstrom, Shelley Wright

Response to the Impact of the 2022 Proposal for the Establishment of a Department of Astronomy and Astrophysics on the Department of Physics Report

We thank the Physics Department for the work they have invested in assessing the impacts of a potential new Astronomy & Astrophysics Department on the Physics Department. While we do not fully agree with the report's findings or narrative, we concur that it is critical to identify the areas where collaboration will be needed to ensure a smooth transition as the new department is created. We are eager to work with our colleagues to ensure that the transition happens with minimal impact to the functionality of both departments. We emphasize that all of the points raised in the report can be addressed and none preclude the creation of a strong new Astronomy & Astrophysics Department.

We would like to address the following points raised by the Physics Department report:

1. The Dean of Physical Sciences has created a working group with members of both the Astronomy Task Force and Physics Department to resolve outstanding academic issues. This group will identify courses for cross-listing and resolve issues around prerequisites needed for upper division courses. If needed, the new department can develop additional relevant upper division astrophysics courses for our majors (e.g., astrophysical quantum mechanics).

2. It is important that the name of the new department reflect the content of the research and teaching within it, and as such the department name should be Astronomy & Astrophysics. Not only are these topics functionally synonymous, but it is important for our students’ degrees to accurately reflect their knowledge and skills, and a degree in Astronomy & Astrophysics will be more meaningful to future employers. We also note that the main research journal that the bulk of our faculty publish in is entitled The Astrophysical Journal.

3. The motivation for the creation of the department is threefold: research, teaching, and climate/EDI. As outlined in the department proposal there is national demand for astrophysics degrees and we aim to provide our students the best possible education in this field, which involves the creation of undergraduate degree programs and new courses. We also aim to remain competitive nationally and internationally in astronomy and astrophysics, and we can not grow and remain agile in the Physics department. This issue is reflected in the lack of recent faculty hiring in our area. The table in Appendix A is inaccurate; no faculty hires since 2016 originated in the astronomy and astrophysics group.
There is inaccuracy in the reported number of graduate students in the Astronomy Graduate Program, which is 9 students over 2 years, not 16 as stated in the report.

Top research universities commonly have separate departments in astronomy/astrophysics and physics (e.g., Harvard, Princeton, Yale, Chicago, Caltech, UC Berkeley) and operate collaboratively in both education and research. There is strong precedent and heritage of this format at other institutions, and we look forward to resolving any outstanding academic and administrative issues in order to create a new Astronomy & Astrophysics Department at UC San Diego.
December 13, 2022

ELIZABETH H. SIMMONS
Executive Vice Chancellor, Academic Affairs

SUBJECT: Proposal to Establish a Department of Astronomy & Astrophysics

Dear EVC Simmons,

The proposal to establish a Department of Astronomy & Astrophysics was distributed to Senate standing committees and discussed at the December 5, 2022 Senate Council meeting. Senate Council approved the proposal and voted to place it on the February 21, 2023 Representative Assembly meeting agenda. Council offered the following comments and questions for consideration:

- Overall, Council found that a new department is warranted, given that faculty in the fields of Astronomy and Astrophysics have different research expectations, the potential for creating new undergraduate programs, and the opportunities to enhance student and faculty diversity. Council was convinced of the intellectual merit for the new department.

- Noting that the Center for Astrophysics and Space Sciences (CASS) has been a successful ORU, reviewers had questions regarding the absorption of the ORU into the new department. It is Senate Council’s hope that CASS’ current, successful interdisciplinary research will continue and/or that a new ORU be established. It is recommended that more details be provided regarding the reallocation of personnel and resources from CASS, especially as it relates to graduate student support. It is also unclear if/how the absorption of CASS will affect the Department of Physics’ staffing.

- There were concerns surrounding course availability and scheduling in the new department, especially as it relates to the timing of prerequisites in the new department, as well as issues related to admissions. If a Physics student opts to move to a major in the new department, it is not clear if they would have to go through the formal established process to accept continuing students into a capped major if they opt to switch back.

- With the anticipated significant increase in undergraduate enrollments in Astronomy & Astrophysics, reviewers noted the lack of information in the proposal about how the new undergraduate courses can be offered in the early years of the new department without negatively impacting graduate course offerings. In the short term, if the number of faculty is staying the same but they are teaching an increased number of students, how will this impact course offerings in both departments?

- It was noted that the Department of Physics currently does not include detailed departmental standards in review files, which makes it harder for reviewers to adjudicate those files. It is the hope that discipline-specific criteria will be developed and used in the file review process for the new department.

In November 28, 2022 e-mail from Dean Boggs (attached), he noted that the Division of Physical Sciences has formed a workgroup, composed of both Physics and Astronomy leadership, faculty, and staff to resolve issues identified by the Department of Physics that may result from the establishment of the Department of Astronomy & Astrophysics. Council is pleased to learn of its establishment and encourages the workgroup to discuss and resolve the items raised during Senate review.
The Committee on Academic Personnel, Committee on Diversity and Equity, Committee on Research, Committee on Planning and Budget, Educational Policy Committee, Graduate Council, and Undergraduate Council reviewed the proposal. Their responses are attached.

Sincerely,

Nancy Postero
Chair
San Diego Divisional Academic Senate

Attachments

cc: James Antony, Dean, Graduate Division
    Steven Boggs, Dean, Division of Physical Sciences
    Marie Carter-Dubois, Associate Vice Chancellor, Resource Administration
    Robert Continetti, Senior Associate Vice Chancellor, Academic Affairs
    John Hildebrand, Senate Vice Chair
    Lori Hullings, Senate Executive Director
    John Moore, Dean, Division of Undergraduate Education
    Alison Sanders, Assistant Vice Chancellor, Academic Affairs
Lucius, Jenna

From: Hullings, Lori  
Sent: Monday, November 28, 2022 9:41 AM  
To: Lucius, Jenna  
Subject: FW: Astronomy Task Force Response to Physics Department Report

On Mon, Nov 28, 2022 at 8:14 AM Alison Coil <acoil@ucsd.edu> wrote:

Dear Senate Chair Postero,

Attached is a brief response from the Astronomy Task Force to the "Impact of the 2022 Proposal for the Establishment of a Department of Astronomy & Astrophysics on the Department of Physics Report" that was recently submitted to the Academic Senate by the Physics Department. We look forward to receiving the Senate’s questions and comments on our Astronomy & Astrophysics Department proposal later this month; please let us know if you have any questions or concerns in the meantime.

Thank you very much,
Alison Coil, on behalf of the Astronomy Task Force
NANCY POSTERO  
Academic Senate, San Diego Division

SUBJECT: Proposal to Establish Department of Astronomy & Astrophysics

The Committee on Academic Personnel (CAP) met on October 19, 2022 to review the proposal to establish a Department of Astronomy & Astrophysics. CAP has no objections to the proposal.

The committee unanimously supports the creation of a Department of Astronomy & Astrophysics. CAP encourages the proposed Department to develop criteria for promotion and advancement as part of their planning process. CAP members are hopeful that more discipline-specific criteria will be useful for the personnel review process.

Frank Biess, Chair  
Committee on Academic Personnel

Cc: J. Hildebrand  
L. Hullings  
J. Lucius
November 21, 2022

NANCY POSTERO, CHAIR
Academic Senate, San Diego Division

SUBJECT: Proposal to Establish a Department of Astronomy and Astrophysics

The Committee on Diversity and Equity (CDE) considered the Proposal to Establish a Department of Astronomy and Astrophysics at its October meeting. Unfortunately, these discussions took place before the committee received the Report from the Department of Physics Task Force on 11/17/2022. It was the consensus of the committee that the proposal makes a strong case for the new department in terms of scientific discoveries, new undergraduate programs, and a more diverse student and faculty body. Overall, the committee was supportive and endorsed the proposal to create this new department. The CDE noted that, if possible, the CPB should examine the increase in financial costs to the school in more detail. It was the hope of the CDE that this effort will be supportive of enhancing the diversity of faculty with new hires and commended its stated initiatives to increase the new program's diversity and inclusiveness. However, there were some concerns raised on this issue, given the Physics Department apparently opposing such DEI efforts in recent years. The potential impact on the Physics Department's diversity efforts should be considered carefully. It is recommended that the Senate request information from the Department of Physics about how they would plan to better address DEI in their faculty hiring moving forward.

Sincerely,

Shantanu Sinha, Chair
Committee on Diversity & Equity

cc: J. Hildebrand
November 28, 2022

NANCY POSTERO, Chair
Academic Senate, San Diego Division

SUBJECT: Review of Proposal to Establish a Department of Astronomy & Astrophysics

The Committee on Research (COR) discussed the Proposal to Establish a Department of Astronomy & Astrophysics at their October 13, 2022 meeting and reviewed the Department of Physics’ task force report. One Committee member from the Department of Physics recused themselves from the discussion. The Committee is supportive of the proposal, although the understanding is that the Center for Astrophysics and Space Sciences (CASS) will be absorbed by the new Department. However, the Committee feels that the interdisciplinary research led by CASS should continue to exist in one form or another, perhaps as a new Organized Research Unit (ORU) if the new Department is approved. There is precedent for the establishment of a department that started as an ORU: when the Institute of Cognitive Science gave way to the establishment of the Department of Cognitive Science, and the Institute was re-established as the Institute for Neural Computation. The Committee sees this as a fitting model that could be applied as CASS and the Department of Astronomy and Astrophysics detangle the relationship between the ORU and the new Department.

We thank you for the opportunity to provide feedback on the proposal.

Sincerely yours,

Jing Yang, Chair
Committee on Research

cc: G. Fuller
    J. Hildebrand
    L. Hullings
    J. Lucius
November 18, 2022

NANCY POSTERO, CHAIR
Academic Senate, San Diego Division

SUBJECT: Proposal to Establish a Department of Astronomy and Astrophysics

The Committee on Planning and Budget reviewed the Proposal to Establish a Department of Astronomy and Astrophysics at its November 15, 2022 meeting. The Astronomy Task Force should be commended for a thorough and clearly argued proposal. Our committee found the justification and explanation of the proposed department convincing. We wondered if only the existence of a successful Astronomy and Astrophysics ORU (since 1979), prevented such a department until now? One committee member asked about staff funding, but new funding requirements appear to be comparatively minimal, since the Center for Astronomy & Astrophysics (CASS) staffing structure would transfer to the new department. There are no new space requirements. The committee is happy to endorse the proposal.

Sincerely,

Michael Provence, Chair
Committee on Planning & Budget

cc: J. Hildebrand
November 18, 2022
Revised December 2, 2022

NANCY POSTERO, Chair
Academic Senate, San Diego Division

SUBJECT: Revised Response: Proposal to Establish a Department of Astronomy & Astrophysics

At its November 14, 2022 meeting, the Graduate Council reviewed the proposal to establish a Department of Astronomy & Astrophysics. The Council has no objections and offers the following comments:

- The Council noted that the proposed undergraduate curriculum contains a number of renamed Physics courses that are (presumably) already being taught, in addition to the several proposed new courses. The proposers anticipate that the Department of Astronomy & Astrophysics will create a significant increase in enrollments. The Council is concerned about the lack of information in the proposal about how the new undergraduate courses can be offered in the early years of the new Department without negatively impacting graduate course offerings. In the short term, Graduate Council is concerned that if there is the same number of faculty, and they are teaching an increased number of students, how this will impact graduate course offerings. The Council is interested in learning what kind of impacts the Department anticipates there might be on graduate course offerings and if there is a plan for addressing those potential impacts.
- The Council would appreciate hearing more details on the plans and transferability for resources and personnel associated with the Center for Astrophysics and Space Sciences (CASS) following creation of the Department of Astronomy & Astrophysics. In particular, Council would appreciate more detail on the immediate use of these resources in support of graduate student training and mentorship, and their necessity in supporting graduate students in the new department.
- The Council recommends that proposers seek information from other universities that have separated their Department of Physics and Department of Astronomy & Astrophysics to find out if the separation was deemed beneficial to graduate training and mentorship.
- The Council is concerned about the potential negative impacts the proposal will have on students to join laboratories and/or select mentors. The Council would appreciate hearing if and how these issues may be avoided.
- The Council recommends that proposers include more details on the current Ph.D. admissions cap and financial support agreement, via the MOU with the Division of Graduate Education and Postdoctoral Affairs, and the plan for redefining the terms of the MOU.

Sincerely,

Timothy Gentner, Chair
Graduate Council

cc: J. Hildebrand
L. Hullings
J. Lucius
November 22, 2022

PROFESSOR NANCY POSTERO, Chair
Academic Senate, San Diego Division

SUBJECT: Proposal to Establish a Department of Astronomy & Astrophysics

At its November 18, 2022 meeting, the Undergraduate Council (UGC) reviewed the proposal to establish a Department of Astronomy and Astrophysics. Overall, the Council endorsed the proposal but notes the concerns provided by the Department of Physics, particularly surrounding students’ ability to take prerequisites and flexibility to switch majors. We imagine these issues can be resolved through future discussions. If the Department is approved, we would expect all curricular proposals submitted to UGC to describe how the concerns regarding prerequisites were addressed.

Sincerely,

Bonnie Kaiser, Chair
Undergraduate Council

cc: J. Hildebrand
    L. Hullings
    J. Lucius
    M. Rabinowitz-Bussell
November 15, 2022

PROFESSOR NANCY POSTERO, Chair
Academic Senate, San Diego Division

SUBJECT: Proposal to Establish a Department of Astronomy & Astrophysics

At its November 14, 2022 meeting, the Educational Policy Committee reviewed the proposal to establish a Department of Astronomy & Astrophysics. The Committee has no objections to the proposal and offered the following comments:

- The Committee had concerns about the impact the establishment of the Department of Astronomy & Astrophysics will have on course offerings in the Department of Physics.
- The Committee noted that establishing a Department of Astronomy & Astrophysics only makes sense if the benefits to students exceed the added resources it will take to establish the department.

Sincerely,

Geoffrey Cook, Chair
Educational Policy Committee

cc: J. Hildebrand
    L. Hullings
    J. Lucius
    S. Mel
January 25, 2023

From the Astronomy Task Force: Kam Arnold, Alison Coil, Patrick Diamond, Michael Holst, Dusan Keres, Quinn Konopacky, Karin Sandstrom, Shelley Wright

Response to Academic Senate Council Feedback on the Proposal to Establish a Department of Astronomy & Astrophysics

We appreciate the Academic Senate comments and questions submitted to the EVC regarding the proposal to establish a new Department of Astronomy & Astrophysics (A&A). We address the Senate Council feedback here and look forward to further discussions at the February 21st Representative Assembly meeting. Brief responses to the main comments are provided here; further details are given in the attached appendices.

Noting that the Center for Astrophysics and Space Sciences (CASS) has been a successful ORU, reviewers had questions regarding the absorption of the ORU into the new department. It is Senate Council’s hope that CASS’ current, successful interdisciplinary research will continue and/or that a new ORU be established. It is recommended that more details be provided regarding the reallocation of personnel and resources from CASS, especially as it relates to graduate student support. It is also unclear if/how the absorption of CASS will affect the Department of Physics’ staffing.

1. The new A&A department will continue excellence in research and maintain and foster the interdisciplinary strengths in our current and future research portfolios. Astronomy is inherently a highly interdisciplinary subject with overlap with multiple fields, and the structure of an academic department, separate from the Physics Department, will increase the flexibility and potential for interactions with other areas of campus. The agreed-upon plan for the Center for Astrophysics and Space Sciences (CASS) by the EVC, Dean of Physical Sciences, and Vice Chancellor for Research is that it will transition from an Organized Research Unit (ORU) to a Center in the School of Physical Sciences. A process will be developed that will collect input regarding current and planned research of current CASS membership, which will be used to determine the best path forward for the center, given the new academic structure.

All CASS graduate students are currently enrolled either in the Physics Graduate Program or the Astronomy Graduate Program (AGP); we will propose that the AGP transfer to the A&A department. Academic affairs with graduate student support and training will continue in the respective graduate programs: Physics Ph.D. program and/or Astronomy Ph.D. program. Any impact on graduate student support and mentorship will be minimal-to-none as graduate students will continue to be supported by their PIs/advisors and respective academic programs. Faculty who currently have students in the AGP all plan to have appointments in the A&A department, and faculty with joint appointments between A&A and Physics are able to mentor students from either program.
Many, though not all, of the resources (space, staffing, grant funding) used to create the new department will transfer from existing CASS resources. The current CASS staff (MSO, fiscal, administrative support) will transition to similar positions in the new department. Support for AP, HR, and student affairs will be created and maintained as needed with support from the EVC and School of Physical Sciences (SPS) through the current Divisional Support Model. Details of this transfer are given in Appendix A below. CASS researchers and technical staff will have the opportunity to join either the A&A or Physics departments, as desired. The current grants administered by CASS will move to the home department of the relevant PI, which will be A&A or Physics.

It is planned that there will be no immediate impact on the staffing in the Physics Department, the needs of which will be assessed and updated over the coming years. As department administrative support under the current model is metrics-based and determined by averaging needs over multiple years, any shifts that might occur should be well known and manageable in advance. The highest probability would be for growth that supports both A&A and Physics, but changes can be made to accommodate any scenario with ample advance planning.

There were concerns surrounding course availability and scheduling in the new department, especially as it relates to the timing of prerequisites in the new department, as well as issues related to admissions. If a Physics student opts to move to a major in the new department, it is not clear if they would have to go through the formal established process to accept continuing students into a capped major if they opt to switch back.

2. Course development and availability will be planned and executed over the first 3 years of the new B.A. and B.S. undergraduate programs to handle incoming first-years, transfer students, as well as students that change their declared major. We present the planned rollout of courses over the first 3 years (following approval of the undergraduate program and transfer of the existing graduate program) in Appendix B. We do not anticipate scheduling or teaching resource load issues based on anticipated faculty assignments and service. The A&A Department and SPS will work directly with the upcoming EVC hiring initiatives and development plans to hire multiple faculty in the first few years, which will be needed to execute the full planned program. Additional teaching availability (approximately 8 courses per year) for A&A faculty will open up as A&A faculty will no longer be teaching non-astrophysics courses in the Physics Department. The planned teaching schedule demonstrates that we will have the necessary faculty to teach and support courses in the first several years of the new department, incorporating anticipated new hires. We are aware that students may want to change majors between the A&A and Physics departments, and we are committed to using petition options for upper division Physics courses to count towards the A&A major as reasonable, so as not to substantially delay the time to degree for our students. For students who opt to switch back into Physics, it is up to the Physics department to decide whether to accept them. We note that currently there are no majors on campus that can easily switch into Physics without adding substantial additional coursework. We do not plan for the A&A majors to be capped.
With the anticipated significant increase in undergraduate enrollments in Astronomy & Astrophysics, reviewers noted the lack of information in the proposal about how the new undergraduate courses can be offered in the early years of the new department without negatively impacting graduate course offerings. In the short term, if the number of faculty is staying the same but they are teaching an increased number of students, how will this impact course offerings in both departments?

3. We do not anticipate resource or teaching load issues for the development of the A&A bachelor’s programs and Astronomy Ph.D. program. The planned rollout of courses presented in Appendix B shows that the necessary graduate courses will be taught while new undergraduate courses are created. As A&A faculty have been teaching approximately 8 non-astrophysics courses a year in Physics, which will no longer continue, this will help alleviate issues around instructor availability. The anticipated increase in student enrollment in A&A courses will not affect the number of A&A courses offered.

It was noted that the Department of Physics currently does not include detailed departmental standards in review files, which makes it harder for reviewers to adjudicate those files. It is the hope that discipline-specific criteria will be developed and used in the file review process for the new department.

4. We appreciate this advice and look forward to developing detailed department standards for review files, separately addressing expectations for experimentalists, observers, and theorists (including indicating when faculty straddle these boundaries). As faculty in astrophysics often work in collaborations of varying size, we plan to clearly explain the collaboration mode relevant in each merit file and describe the specific contributions made by collaborations. The new A&A department will develop departmental standards for review, and understand that more information and discipline-specific context provided in files makes it easier for reviewers to assess them.
APPENDIX A - Administrative resource details

The chart below indicates administrative staffing shifts between CASS and the new Astronomy and Astrophysics (A&A) Department, as well as related funding sources. Where the new unit is identified as “Dean/A&A” it is expected that the Physical Sciences Dean’s office will provide full, dedicated functional area service to the A&A department until its metrics rise to warrant individual positions through the Vice Chancellor for Academic Affairs (VCAA) budget model. Funding metrics for A&A will follow the same allocation and review process as the other departments in the School of Physical Sciences. Where the funding indicates “VCAA advance support”, the EVC’s office has committed startup funding to enable full functioning of the A&A department at its inception, until metrics produce sufficient funding through the model. While some percentage support for administrative functions will move from Physics to A&A, as mentioned in the response above this is not expected to be significant enough to immediately necessitate any staffing changes in Physics. For example, if ~11 faculty FTE leave Physics, no workload percentage would be removed from their single AP analyst, though internal duties may be adjusted. All core CASS administrative staff are 100% FTE, while %FTE varies for many of the technical/research staff.

Per the original proposal, CASS office, laboratory, and shared space on the SERF 3rd and 4th floor will shift to the A&A department, and a full space review will be conducted to determine sufficient space for new growth, etc. This will be completed by the 2nd year of the A&A department, by the EVC’s office and the Physical Sciences Dean’s office.

<table>
<thead>
<tr>
<th>Function</th>
<th>Funding</th>
<th>Current Unit</th>
<th>New Unit</th>
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</thead>
<tbody>
<tr>
<td>MSO/Admin Ofc 4</td>
<td>VCAA support model</td>
<td>CASS</td>
<td>A&amp;A</td>
</tr>
<tr>
<td>Rsch Adm 2</td>
<td>VCAA Support model</td>
<td>CASS</td>
<td>A&amp;A</td>
</tr>
<tr>
<td>Rsch Adm 3</td>
<td>VCAA support model</td>
<td>CASS</td>
<td>A&amp;A</td>
</tr>
<tr>
<td>Admin Asst 3</td>
<td>VCAA support model</td>
<td>CASS</td>
<td>A&amp;A</td>
</tr>
<tr>
<td>Admin Asst 3</td>
<td>VCAA support model</td>
<td>CASS</td>
<td>A&amp;A</td>
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<tr>
<td>Student Affairs Adv 2</td>
<td>VCAA advance support/support model</td>
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<td>A&amp;A</td>
</tr>
<tr>
<td>Academic Personnel</td>
<td>VCAA advance support/support model</td>
<td>ORA/Physics</td>
<td>Dean/A&amp;A</td>
</tr>
<tr>
<td>Human Resources</td>
<td>VCAA advance support/support model</td>
<td>ORA/Physics</td>
<td>Dean/A&amp;A</td>
</tr>
<tr>
<td>Technical &amp; Research Staff (various titles, headcount=11)</td>
<td>Faculty grants</td>
<td>CASS</td>
<td>A&amp;A and Physics</td>
</tr>
</tbody>
</table>
APPENDIX B - A&A Curriculum Development

We have projected the undergraduate and graduate courses that will be offered the first three years of the new A&A Department, after the proposed undergraduate program has been approved and the existing graduate program moved to the new department (expected by fall 2024). The courses offered per quarter are reflected based on faculty availability assuming desired FTE percentages per year, and includes realistic projected sabbaticals and teaching relief for administrative service.

AY 2024/2025

The first year of the undergraduate and graduate programs in the A&A department we project 22 teaching quarters available among the A&A faculty, taking into account FTE percentages and expected release for service and sabbaticals. Table 1 represents the planned course offerings and potential instructors for each course. Both the new undergraduate program and the existing graduate program have all requirements satisfied for this first year. Entering undergraduate freshmen and transfer students in their sophomore and junior year have the necessary courses to engage as a B.A. or B.S. degree in A&A.

<table>
<thead>
<tr>
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<th>SPRING 2025</th>
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<tr>
<td>AST 5</td>
<td>Stars &amp; BHs</td>
<td>A</td>
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<tr>
<td>AST 20A</td>
<td>Intro Astro</td>
<td>B</td>
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<td>AST 101</td>
<td>A. Dynamics</td>
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<td>AST 160</td>
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<td>AST 200</td>
<td>Astro Survey</td>
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<td>AST 201</td>
<td>Radiative Pro.</td>
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Table 1: AY 2024/2025 undergraduate and graduate course offerings. Ten faculty (Prof A - Prof J) with varying FTE percentages per year will participate in instruction.
**AY 2025/2026**

The second year the A&A department plans to roll out three additional new courses in the undergraduate curriculum. We project that 24 quarters are available among the A&A faculty, with projected sabbatical and teaching relief, assuming one new faculty hire. Table 2 represents the course offerings and potential instructors for AY 2025/26.

<table>
<thead>
<tr>
<th>FALL 2025</th>
<th>WINTER 2026</th>
<th>SPRING 2026</th>
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<tbody>
<tr>
<td>Course</td>
<td>Title</td>
<td>Prof</td>
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<tr>
<td>AST 4</td>
<td>Astro in Sci Fi</td>
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<tr>
<td>AST 5</td>
<td>Stars &amp; BHs</td>
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<td>AST 20A</td>
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<td>AST 101</td>
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<tr>
<td>AST 104</td>
<td>Thermal Astro</td>
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<td>AST 160</td>
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<td>AST 200</td>
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<td>AST 201</td>
<td>Radiative Proc</td>
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</tbody>
</table>

*Table 2: AY 2025/2026 undergraduate and graduate course offerings. Eleven faculty (Prof A - Prof K) with varying FTE percentages per year will participate in instruction.*
**AY 2026/2027**

The third year the A&A department will roll out one additional new course in the undergraduate curriculum and will reach the anticipated normal annual number of quarters offered each year. We project that 28 quarters will be available among the A&A faculty, with projected sabbatical and teaching relief, assuming one additional faculty hire. Table 3 represents the course offerings and instructor for AY 2026/27.

<table>
<thead>
<tr>
<th>FALL 2026</th>
<th>WINTER 2027</th>
<th>SPRING 2027</th>
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<td>Course</td>
<td>Title</td>
<td>Prof</td>
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<td>AST 4</td>
<td>Astro in Sci Fi</td>
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<td>AST 20A</td>
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<td>AST 101</td>
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<td>AST 104</td>
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<td>AST 160</td>
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<td>AST 200</td>
<td>Astro Survey</td>
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<td>AST 201</td>
<td>Radiative Proc</td>
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<td>AST 229</td>
<td>Instrumentat</td>
<td>I</td>
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</tbody>
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|               |                   |       | AST 227 | Cosmology | A    |

*Table 3: AY 2026/2027 undergraduate and graduate course offerings. Thirteen faculty (Prof A - Prof M) with varying FTE percentages per year will participate in instruction.*
January 17, 2023

To the Academic Senate Council members,

The School of Physical Sciences (SPS) and the Office of Research Affairs (ORA) are supportive of the establishment of a Department of Astronomy & Astrophysics (A&A) at UC San Diego. Both offices agree that the Center for Astrophysics and Space Sciences (CASS) would transfer from being an Organized Research Unit (ORU) to a non-ORU Center in the School of Physical Sciences if and when the new A&A department is formed. SPS and ORA offices will be actively involved in supporting this transition and will help determine the format of the non-ORU Center. A process will be developed that collects input and feedback from current CASS members on the best path forward that will continue to strengthen the astrophysical and space science research endeavors at UC San Diego.

Co-signed by Dean and VCR

Steven E. Boggs  
Dean, School of Physical Sciences

Corinne Peek-Asa  
Vice Chancellor for Research
EIGHTH COLLEGE – DETAILED ACADEMIC PLAN

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0. Executive Summary

This academic plan presents the proposed theme and general education curriculum for Eighth College, with a start date of Fall 2023. The proposal for an eighth college has been developed, following the UC Compendium process. This proposal was approved by the UC San Diego Divisional Senate in June 2021 and the system-wide Academic Council in March 2022; it will be presented to the Board of Regents at their May 2022 meeting for final approval. The college is proposed to admit its first students in Fall 2023. The proposal presented both an academic theme for Eighth College and a general education structure. This academic plan reviews the justification for the academic theme and provides additional detail on the general education in the form of an academic plan.

Eighth College represents an important step in establishing the physical and academic infrastructure necessary to create a student-centered campus in the wake of increased enrollments. Following Seventh College, established in Fall 2020, this new college should allow enrollments to decompress to approximately 4,000 students per college (assuming the 2035 long-range plan for about 32,000 undergraduates). The original six colleges now have enrollments well over 5,000 (Seventh will reach its full size in Fall 2023); this strains college resources and negatively affects the student experience. As UC San Diego is dedicated to a vibrant undergraduate college system to help achieve student-centeredness, Eighth College is a necessity.

Eighth College has a proposed academic theme of ‘Engagement & Community’ – one that emphasizes critical community service learning (Mitchell 2008) and forms the basis of an anti-racist curriculum. The proposed general education curriculum, following Seventh College’s model, is based on best practices from a large literature on general education (section 3.ii). Key to this model is a synergy between ‘alternative’ courses – breadth requirements taken in academic departments and programs – and the college-based ‘engagement’ courses. The former are curated around the college theme and provide a liberal arts foundation in Arts, Humanities, Social Sciences, Natural Sciences & Engineering, and Quantitative Reasoning (section 3.iii.a). The latter – a four course sequence – culminates in a community-based capstone project. Three lower-division courses provide the scaffolding for this capstone, emphasizing critical reading, writing, aspects of social inequity, and critical community service learning (section 3.iii.b). A transfer-specific upper-division course would provide similar scaffolding for transfer students before they embark on the capstone. The experiential goals of the engagement series encourage engagement with course material from both the alternative general education courses and the student’s major.
The following sections provide details on the college theme, the general education curriculum, and aspects of their goals and implementation. Further information is provided in the appendices.

1. Request and Justification

While the Divisional system-wide Senates have already approved the Eighth College proposal, including its theme and general education framework, this academic plan provides additional detail. Thus, this document – to be reviewed by the Divisional Senate - is similar to a curricular proposal; instead of proposing major/minor requirements, this plan proposes a general education curriculum in line with the curriculum in the previously approved proposal.

As mentioned in the Executive Summary, the primary justification for creating an Eighth College is two-fold: (i) the campus commitment to a vibrant undergraduate college system as part of its student-centered strategy and (ii) recent increases in undergraduate enrollments; the latter is currently jeopardizing the former. UC San Diego is proud of its unusual undergraduate college system. These academic units uniquely bring together general education curricula, student affairs, academic advising, and residential life in innovative ways that try to achieve a smaller, liberal arts college environment in the midst of a large R1 university. However, with current colleges enrolling around 5,500 students each, we are not able to provide the level of service required to achieve this goal. Thus, two additional colleges have been proposed in the past five years: Seventh College welcomed its inaugural class in Fall 2020; we hope that Eighth College will do the same in Fall 2023. If we can keep our campus undergraduate enrollments near the long-range plan of 32,000, these new colleges – once at steady state – will enable the other colleges to decompress to around 4,000 students per college.

As academic units, the colleges define themselves through an intellectual theme and a general education curriculum. Eighth College’s theme and curriculum – already approved at the proposal stage by the Divisional and system-wide Senates – are the product of two Senate-Administration workgroups and are informed by the literature on general education design. Further justification and details are presented in subsequent sections.

2. The Eighth College Theme

The UC San Diego undergraduate college system is characterized by having unique intellectual themes associated with each college; these themes underpin the colleges’ identities. The themes typically inform the basic aspects of the general education programs and shape the character of co-curricular programs. As discussions of the Eighth College theme evolved, the following criteria emerged:
● The theme must have intellectual depth
● The theme should be sufficiently focused to provide clarity and guidance
● The theme should lend itself to work in multiple disciplines
● The theme should be both timely and enduring
● The theme should have a community-facing component

The theme “Engagement & Community” meets these criteria. In addition, it clearly aligns with UC San Diego Strategic Plan’s goals of “Community Enrichment” and “Diversity and Access”, as well as the plan’s research themes, “Enriching Human Life and Society” and “Understanding Cultures and Addressing Disparities in Society”.

The notion of ‘engagement’ entails that students will develop an understanding of their own identities vis à vis broader communities. The Carnegie Foundation defines ‘community engagement’ as follows:

*Community engagement describes collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good.*

This is very relevant to the goals of the Eighth College curriculum - through the program’s interdisciplinary content, students will be able to engage in priority areas for the community. Following Chaskin 2013, the concept of ‘community’ can have social, spatial, and political dimensions. Students may engage with communities both within and external to UC San Diego (see also McCloskey, et al. 2011).

Areas of engagement may be multi- and inter-disciplinary and potentially align with social sciences, arts, humanities, and STEM fields. As detailed below, the general education curriculum is designed to lead to significant experiential, community-engaged inquiry. Importantly, the curriculum equips students with the tools to conduct community-engaged inquiry in an equitable manner that prioritizes and respects community partners’ human, social, and cultural capital; we emphasize that the goal is to partner with communities in work toward a mutually agreed upon goal. Thus, this academic plan is informed by research on critical and decolonizing service learning (Mitchell 2008, Santiago-Ortiz 2019). In addition, as the college implements its curriculum, it will review the work of [universities that have the Carnegie Community Engagement designation](http://www.carnegie.org), as well as [community-engaged work sponsored by the Corella & Bertram F. Bonner Foundation](http://www.corella.org), particularly through its Racial Justice
Community Fund. Synergies may be developed with local universities (e.g., CSU San Marcos, SDSU, and USD), as well as other AAU campuses (UC Davis, UCLA, and Columbia, among others).

This theme is both timely and persistent. It is at the heart of some of the most difficult global challenges that humanity faces: structural racism; widening disparities in economic wealth; compromised health and wellbeing; climate disruption; ecological degradation; the globalization of chronic and infectious disease types and vectors; and the declining resilience in the capacity of human settlements and working lands to adaptively respond to increasingly frequent and devastating shocks happening worldwide. The COVID-19 pandemic gave a preview of such a crisis on a global scale – we need to train students to understand and respond to these challenges. By developing new approaches to civically engaged pedagogy and experiential learning, we propose to inspire and equip future leaders. The Engagement & Community theme places an emphasis on this challenge.

Importantly, in response to the George Floyd and other murders, as well as demands by the Black Student Union and the Black Graduate and Professional Student Association, the Engagement & Community theme leverages and is aligned with campus-wide efforts to combat structural racism. As detailed below, structural racism and the role of community are fundamental in the college’s core curriculum.

All academic schools on campus teach and conduct research and/or creative activities in areas that resonate with Engagement & Community, particularly as they address questions of social justice and structural racism. The following shows this with respect to the five academic areas every UC San Diego general education program is expected to address; this is intended as illustrative, rather than exhaustive.

Arts
UC San Diego’s Arts departments explore themes of social justice through the lens of community-engaged artistic practice. Examples include work on Blacktronika music, engaging in the intersection of artistic expression and fluctuating conditions at the US-Mexico border, and Chicanx/Latinx theater.

Humanities
The three Humanities departments explore structural racism from literary, historical, and philosophical perspectives. Each of the three departments have robust offerings that satisfy the campus Diversity, Equity, and Inclusion requirement. Intersectional approaches to diversity, equity, and inclusion are central to much of the research and teaching in these areas.
Social Science
Themes such as migrations, multiculturalism, economics of climate change, resource management and pollution, impacts on language and culture, urban planning, educational systems, income inequality, and global health are all of vital interest to Social Science departments and lend themselves to interdisciplinary study both within the many social science departments/programs and in collaboration with other disciplines.

Natural Sciences & Engineering
Within the Natural Sciences and Engineering there are clear connections in many areas, including Health Sciences (public health, diseases and society), SIO (climate change and society), Physical Sciences (energy and the environment), Biological Sciences (human impact on the environment, nutrition, behavior, equity issues and human biology), and Engineering (changing technologies and their interplay with communities).

Quantitative Reasoning
A variety of areas – e.g., statistics, computational thinking, and data science - provide quantitative tools that enable data driven inquiry and solutions in a number of areas, including public/global health and education.

As we discuss below, inter-disciplinary inquiry is central to the Eighth College academic plan; the Engagement & Community theme is flexible, but also provides focus to this type of work.

3. Academic Plan and Curricular Requirements
In their response to the Seventh College pre-proposal, UC San Diego’s Academic Senate Educational Policy Committee recommended that, as part of the planning process for Seventh College, the campus creatively reimagine general education requirements. To this end, a workgroup was charged with developing a framework for the intellectual focus and academic mission of the college. The workgroup began by looking at innovations and best practices in the field of general education. This included a survey of about a dozen institutions and a review of general education literature. The Eighth College proposal builds on this work, which is summarized in the next sections.

i. Approaches to General Education
General education provides a cornerstone to a liberal arts education. It exposes students to diverse manners of thought and inquiry; introduces multi-disciplinary content; and provides writing-intensive training. It also provides training in skills that allow for productive careers and engaged citizenship. While, in many cases, the discipline-specific content of one’s major will be crucial for post-graduate study and
careers, a liberal arts education embeds this training in a broader perspective and develops many assets that may be absent from major coursework.

Traditionally, there have been two approaches to general education: required courses or alternatives (University of California Commission on General Education in the 21st Century. 2007).

Under the required course approach, students are required to take prescribed courses as at least part of their general education. All of the seven undergraduate colleges at UC San Diego instantiate this approach to some extent, but five have extended general education sequences: the core programs at Revelle (Humanities), Marshall (Dimensions of Culture), Roosevelt (Making of the Modern World), Sixth (Culture, Art, and Technology), and Seventh (Synthesis Program) are taken by all students who enter as first time full-time students; these combine two quarters of intensive writing with specific thematic content, as well as subsequent quarters with specific content. In general, the core sequences are closely aligned with the college theme. Two colleges – Muir and Warren – have stand-alone writing programs that each consist of two writing-intensive courses.

The alternatives approach to general education represents a move away from prescribed courses in favor of a designated menu of breadth requirements. Students choose from a variety of options within various categories (e.g., Arts, Humanities, Natural Sciences & Engineering, and Social Sciences). At UC San Diego, all colleges use this approach to some degree. For example, in Muir and Warren, while all students take two prescribed writing-intensive courses, these are stand-alone, and not theme-based. The remainder of the general education requirements come from an array of choices offered in the academic departments. Even the five colleges with core sequences employ the alternatives approach to round out their general education requirements, requiring a variety of breadth courses from various departments.

Either approach – prescribed courses or alternatives - provides breadth of academic content. Each approach has its advantages. The core courses often serve to introduce students to the college culture and can result in bonding and a sense of cohort. The alternatives approach allows students to explore outside their initial interests, sometimes leading to a new choice of major.

In addition to breadth of content, general education demonstrates diversity of thought: It provides students with exposure to the different intellectual traditions that make up the academy. This may be even more important than content, as it potentially prepares students to view the world and challenges from diverse points of view.
ii. Structuring General Education

Over the past decade there has emerged a body of literature that emphasizes the need to structure general education in new ways (e.g., Gaston, et. al., 2010, Gaston 2015, and Paris, et. al. 2015). While diverse modes of inquiry and liberal arts content continue to be important goals, it is also important to structure a program in a way that favors sustained student engagement in general education. To that end, the literature identifies several best practices:

- Interweave general education through the academic career
- Engage students in interdisciplinary work that brings modes of inquiry and content from several areas (including students' majors)
- Focus on solving difficult problems through capstone projects
- Provide tools for written and oral communication and collaborative projects
- Incorporate high-impact practices, including community-based projects, internships, study abroad, and the like
- Employ inclusive pedagogical practices in recognition of a more diverse student population

Adopting these practices is in service of our campus' aspirational strategic plan – “to be a student-centered, research-focused, service-oriented public university;” it brings together pedagogy, research, and service in the undergraduate experience in a holistic manner. The challenge before us is to scale a program to serve the approximately 4,000 students in Eighth College. Furthermore, if general education is to be included throughout the academic career, all Eighth College students will be simultaneously engaged in some form of general education at any given time. Since UC San Diego often cites our college system as embedding liberal arts colleges in a large R1 research university, we should embrace the challenge of designing the above practices into a college’s general education program. The following section describes our proposed framework for accomplishing this ambitious goal.

iii. Proposed General Education Framework: Alternatives and Engagement Courses

The general education framework for Eighth College follows the basic outline of the Seventh College curriculum: alternatives courses, curated from departmental offerings, provide breadth and introduction to diverse intellectual traditions, while four sequential college-specific engagement courses emphasize engagement in interdisciplinary approaches to areas of relevance to the local communities and beyond. The final engagement course requires a community-based interdisciplinary research project. Two of the engagement courses will be writing-intensive; all will emphasize community, wellness, anti-racism, and social justice. Indeed, there is a body of literature that emphasizes the importance of community-based experiential learning (e.g., Jach and
Trolian 2019 and Rabinowitz Bussell, et al. 2021). Aside from potential impacts on communities, critical and decolonized service learning provides opportunities for self-reflection through a multi-disciplinary lens. This type of self-reflection is a goal of the campus Diversity, Equity, and Inclusion requirement, which engagement courses might be approved to satisfy. These four college-based courses are supplemented with the ten curated alternative courses from arts, humanities, social sciences, natural sciences/engineering, and quantitative reasoning. This curriculum adheres to the Divisional Academic Senate-approved general education guidelines (see Appendix A).

a. Alternatives
As in many alternatives-oriented general education programs, the diverse modes of inquiry and liberal arts content will come from courses taken in academic departments and chosen from a variety of fields. To ensure intellectual coherence and depth, while retaining sufficient selection to guarantee course availability, these courses will be carefully curated around the college’s intellectual theme. These are distributed as follows:

Alternatives
Two courses each from curated selections from:

- Arts
- Humanities
- Social Sciences
- Natural Sciences & Engineering
- Quantitative Reasoning

Given the Engagement & Community theme, training in a variety of qualitative and mixed methods research is particularly important. We suggest that this be incorporated in the social science alternatives. As is currently the case in other colleges, some overlap between alternatives courses and courses taken in the major can effectively reduce the number of alternatives students take beyond other coursework. It is worth emphasizing that this would apply equally for all students, regardless of major, and all students would achieve similar breadth, regardless of whether some of the breadth comes from the major versus general education alternatives. An additional benefit of allowing some overlap comes from students who branch into new majors due to their alternatives exploration. Finally, students will be encouraged to take alternatives courses throughout their academic careers – at a rate of approximately two per year.

We emphasize the importance of curating these courses, so they connect meaningfully to each other and to the engagement courses. As was the case with Seventh College alternatives courses, departments are invited to develop courses tailored to these
requirements, allowing the college to design a coherent inter-departmental curriculum that emphasizes, among other things, ethics; writing; critical thinking; social justice; public policy; foreign language and cultures; historical and multicultural understanding; design thinking; and business elements (e.g., project management, financing projects through grant development, budgeting and resource allocation, leadership/building teams). While students may explore these areas through a variety of alternative courses, it is important that these curricula be structured and coherent. It is also important to create sufficient courses and availability to accommodate all participating students. A list of examples of courses that may satisfy these alternative requirements in each of the five areas is presented in Appendix C.

b. Engagement Courses
The UCSD Eighth College has ambitious and actionable learning objectives that are characterized by the following:

- A foundation of ethical practices
- Recognition of our humanity as it transcends across disciplines
- Prioritization of social and emotional well-being of students and community
- Intellectual curiosity
- Ambitious reciprocal and respectful efforts inside the classroom and outside to achieve transformation as we seek to solve historical and imminent challenges facing our communities – locally and throughout the world

UC San Diego students and those in Eighth College particularly are in a unique position to critically reflect on and put into action their connections to those at UC San Diego, the region, and more broadly the world.

The reflection process requires self-awareness, empathy, strong interpersonal communication skills (including for self-advocacy and advocacy on behalf of others), cultural humility, acceptance of responsibility for one’s actions, flexibility, resilience, and persistence to address enduring and emergent challenges to individual and community well-being.

UC San Diego students and those in Eighth College especially must have a deep understanding of the factors that have historically led to discrimination, structural and institutional racism, social exclusion, intentional and unintentional marginalization and harm to diverse communities. These conditions have in part also created mistrust among diverse communities to broader social institutions.
Awareness of how historical factors interplay with current conditions is needed in order to create innovative and sustainable person and community-centered solutions to today’s most challenging problems— not only those that are known today but also those that will arise in future moments.

The multi-disciplinary curriculum of Eighth College seeks to build students’ abilities to engage with diverse communities using a holistic approach to well-being by addressing not only physical health, but emotional health, social support by creating community within the college, and to foster intellectual curiosity that considers how prior and current approaches are rooted in an ethical approach to engaging community members and partners as part of the discovery process and strategies to create bold solutions to diverse global and local challenges.

**Description of Courses**

Eighth College’s proposed Engagement Program provides the backbone training for engaged future leaders to face the intersecting challenges discussed above. The program should inspire knowledge-seeking and promote equitable, community-based, and interdisciplinary approaches to addressing significant social injustices. Thus, the Engagement Program has both theoretical and practical orientations. Eighth College has the potential to lead these efforts both on and off campus. Planning for the engagement courses should be in response to the following overarching question regarding broad learning outcomes for students, “What is the shared intellectual, social-emotional, and ethical experience that we want for students to empower them as future leaders?”

Engagement courses provide training in interdisciplinary inquiry and community engagement. They bring together modes of thought and content from both alternatives courses and other coursework, including major courses, the campus-wide Diversity, Equity, and Inclusion requirement, and electives. These courses focus on interdisciplinary approaches to complex problems and successful solutions. Two of the lower-division courses focus on writing and all provide preparation for community-engaged projects; the upper-division capstone course is project based. Such a structure is designed to accomplish the best practices detailed above; the interdisciplinary nature of the courses allows students to engage with material from the alternatives course. Finally, because these are aligned with entering classes, the engagement courses help form a feeling of shared experience among a cohort. The engagement courses are organized into two lower-division first-year courses (the second one being writing-intensive), one lower-division second-year course (writing-intensive), followed by one upper-division project-based course that emphasizes
collaborative work. The following describes the college curriculum for incoming first-year students.

**Engagement 1** – This course introduces foundational elements of interdisciplinary approaches to community-engaged work. It will emphasize critical reading, critical reflection on self-identity and social positionality, as well as ethical considerations of community engagement, particularly as it affects vulnerable populations. The materials will be focused on:

- Developing foundational knowledge about structural racism and its impact on communities, groups, and individuals
- Cultivating ethical researcher identities through skill-development around building respectful community relationships and reflective practices for unpacking implicit biases and positionality
- Understanding the roles of ethical community-based research in advocating for social justice and anti-racism in institutional policies and practices, and in individual actions

Learning outcomes include:

- Define structural inequality and describe community-based research as a tool for social justice
- Apply social-emotional skills to regularly reflect on their positionality as writers and novice researchers

As this introductory knowledge is developed, students will practice their critical reading skills in order to:

- Develop and apply rhetorical knowledge in their understanding of a text’s audience, purpose, and context
- Understand the expected conventions (i.e., the formal and informal guidelines governing pieces of writing) that they will reasonably encounter and be expected to understand during their educational progress at UC San Diego

**Engagement 2** – This writing-intensive course will survey a number of community-engaged areas of inquiry with an eye toward understanding interdisciplinary approaches to responding to challenges and opportunities in community engagement. The curriculum will emphasize a variety of methodological and ethical approaches in STEM, Humanities, Arts (in particular, ‘art as action’), Social Sciences, and Systems Theory. Students will engage in a variety of writing activities in which they critically consider
source materials, methods and consequences of community-based research. These writing activities will draw on foundational concepts and learning from the Engagement 1 course (particularly related to understanding the role of ethical community-based research in advocating for social justice and anti-racism). Building on the critical reading skills developed in Engagement 1, students will:

- Develop a flexible writing process that recognizes drafting is non-linear, iterative, and communal
- Develop an understanding of observation, analysis, and qualitative methods
- Develop a reflective practice of writing, employing a variety of strategies: e.g., drafting, revising, and editing
- Practice writing that is motivated by multiple purposes from summary to analysis to synthesis in order to understand that writing can be defined by a variety of contexts and audiences from the discipline-specific to community-based, including fieldnotes, analytical reflection, and writing for community partners

**Engagement 3** – This writing-intensive course draws on key concepts and ideas from the Engagement 1 and Engagement 2 courses (such as foundational knowledge about structural racism, research ethics and positionality, and ethical research methodologies for authentic community collaboration) to prepare students for the upper-division capstone project. Engagement 3 allows students to integrate their learning from the prior courses as they explore possible topics for their capstone project. Through critical reading and critical writing, students will explore topics that reflect their passions and positionalities. They will examine the extent to which their topics:

- Relate to issues of structural racism and inequality in local communities
- Can be best understood through engaging community voices and perspectives
- Require a solution that promotes social justice or anti-racism at the community level

Students will also continue to reflect on their positionality to be mindful of how their own identities and experiences influence their research decisions. In addition, students will learn strategies for entering and exiting communities in ethical and respectful ways, building rapport and trust with community stakeholders, and for identifying and leveraging the strengths of persons, institutions, as well as the natural and built environments. The primary learning outcome is that students, upon completion, will have the necessary background knowledge, social skills, positionality awareness, ethical commitments, and cultural sensitivity to design a community-engaged project that holds the potential to create real change at the local level. In addition to the
Engagement 2 writing goals (above), students must be trained in foundational research methodologies:

- How to locate and evaluate sources
- Conduct primary and secondary research with print and non-print sources
- Generate initial research questions and proposals
  Gain the knowledge and skills to assess the strengths and weaknesses of various discipline-specific research methodologies with an analytic eye for designing community-based inquiry that reflects robust design principles, authentic community collaboration, ethical research practices, and solution-oriented thinking to address issues of injustice

*Engagement 120, Community Project* – This project-based capstone course will require a community-engaged project that draws on learning outcomes, course concepts, and insights from the three prior Engagement courses. The result would be a group project, presented in a variety of media types (e.g., written, performed, film, exhibition, etc.). Students’ project-based capstone projects should focus on finding local solutions to real problems facing communities. Given the pervasive and complicated nature of structural inequality, projects can, for example, focus on parts of a larger problem and a solution that might be one strategy towards a larger more complex solution. It is unrealistic for students to expect to solve racism or dismantle institutional inequality in one project. However, they can engage in problem-solving and solution-oriented thinking about complex societal problems. Engaging with the complexity of larger societal issues is one step toward finding relevant solutions. Student projects should focus on solutions that are local, relevant, and, most importantly, that have the potential to lead to larger solutions. For instance, students interested in investigating water pollution in low-income neighborhoods might focus on ways residents can advocate for cleaner water through publicizing news stories, partnering with non-profit agencies, or talking with local political leaders. While these projects may not solve the issue of polluted water, they can raise public awareness and help residents advocate for themselves. As another example, students interested in understanding the experiences of transgender students in rural areas might focus on highlighting the voices of transgender students through storytelling about living in rural communities or various kinds of art that can be publicly displayed. Again, the project may not eliminate prejudice in the community, but it could provide an outlet for a silenced and marginalized population to be seen, heard, and valued by members of the community.
Engagement 110 – designed for transfer students – discussed below.

A guiding principle for the Engagement Courses will be to require students to engage in material they have studied in their alternatives and other courses. This is the glue that binds the general education framework and helps keep the alternatives connected within the student’s overall academic pathway. Putting together both the curated alternatives and the Engagement courses, the framework is designed to form a coherent liberal arts general education that has advantages of both required courses and alternatives.

c. Writing
Each of the current seven colleges requires two writing intensive courses. These are either stand-alone (Muir or Warren) or embedded in the core sequences. Similarly, the Eighth College curriculum features two Engagement courses with an intensive writing curriculum. The writing assignments will include interdisciplinary projects and may emphasize writing both within and across disciplines. Rather than beginning the writing intensive courses during the first Engagement 1 course, the proposal is to shift writing to the second and third courses. There are several advantages to this: (i) it allows students time to acclimatize to the university and form a cohort with their peers in Engagement 1 before launching into a writing curriculum; (ii) Engagement 1 can introduce critical reading and interdisciplinary topics; this continues in Engagement 2, where students will be better prepared to begin the writing curriculum; (iii) students who must enroll in the Analytical Writing Program to satisfy the Entry Level Writing Requirement will often be able to continue to Engagement 2 with their peers.

The colleges’ lower-division writing courses implement part of the Senate’s guidelines on general education curricula. Note that while writing is a crucial part colleges’ mission, it is embedded in a wider general education curriculum that aims to provide both breadth and depth in a variety of disciplines (see Appendix A). These guidelines include five writing-intensive courses; the colleges all provide two such courses in their lower-division curricula; the remaining courses should come from writing in the disciplines (and often upper-division).

Lower-division students will take three 4-unit courses, in the first two years. These courses will function as a common core insofar as they will provide a shared experience that will help create an intellectual community. The purpose of the lower-division sequence is to provide first and second year writing instruction and prepare students for the upper-division capstone by introducing the theoretical background on critical community engagement. In addition, these courses prepare students for upper-division
writing in their majors. Through the activities and assignments of the Engagement Program, students will:

- Learn about rhetorical knowledges
- Develop their critical reading, writing, and thinking processes
- Develop a writing process by exploring strategies for reading, brainstorming, drafting, collaborating, and revising
- Develop an understanding of observation, analysis, and qualitative methods
- Develop critical language awareness by exploring why genre conventions for structure, paragraphing, tone, and mechanics vary and are historically connected to a dominant group of language users
- Gain experience in a variety of writing genres that support community projects, including fieldnotes, analytical reflection, project proposals, and writing to support community partners

d. Transfer Students
The above general education framework is structured around a four-year college experience – it assumes students enter as first year students and stay in the college for four years. However, one-third of our undergraduates enter UC San Diego as transfer students – either from community colleges or other four-year institutions. Transfer students often complete a program of study – Intersegmental General Education Transfer Curriculum (IGETC) - that allows them to complete most general education requirements at a California community college. How might transfer students benefit from the Alternatives and Engagement framework without having to take a significant number of additional general education courses?

Because the framework is structured to require general education throughout the academic career, transfer students, as upper-division students could simply take the upper division portion – that is, about five alternatives, one upper-division engagement course, and the capstone. However, at seven courses, this represents a steep requirement; transfer students would face longer times to degree than in the other colleges. This suggests that IGETC transfer students might use the experience from their previous institution to cover the alternatives portion of general education and take Engagement 3 and Engagement 120 (or its equivalent). However, since Engagement 3 is lower-division, it makes more sense to create an upper-division course for transfer students – Engagement 110 – that is both tailored to the specific needs of transfer students and prepares students for the project-based 120 course. At its most foundational, this course should help transfer students understand their positionality and identities as well as the research process in relationship to the community engaged
projects they will be expected to accomplish. In addition, learning outcomes from the Transfer-Year Experience course may be incorporated.

A related question arises when considering whether some alternatives might be waived based on AP (or IB/A-Level) credit. The current seven colleges differ in their approaches – often allowing students to skip the first course in some sequences based on AP scores. We leave this question to the implementation stage where a faculty committee will determine which lower-division alternatives might be impacted and how the coherence of the synthesis sequences will be preserved.

Finally, students who complete approved 4-unit courses with community-based capstone projects in their major may substitute these for Engagement 120. Several majors – e.g., Communication, Education Studies (Partners at learning), Human Development Sciences, Public Health, and Urban Studies and Planning – offer these opportunities. Indeed, there is great opportunity to create synergy between Eighth College and other units that participate in community-based pedagogy.

e. Engaging Community
The workgroup spent several sessions discussing the nature of community engagement. A call to departments and an associated questionnaire provided valuable information on community-based education across campus. Two recurring concerns were articulated:

Critical engagement practices. While there is great value in community-based projects, it is of utmost importance that these be done in a way that is community-centered. We must avoid students going into the communities without sufficient training in critical and decolonizing engagement practices based in equitable community partnerships (Mitchell 2008, Santiago-Ortiz 2019, Rabinowitz, et. al. 2021). It is particularly important that the program avoid allowing student engagement to be viewed as charity or forced volunteerism. There is a real danger that, without sufficient background, student community projects could serve to reify established social hierarchies and perpetuate inequality (Robinson 2000 and Pompa 2002, among others). The workgroup reviewed literature on critical and decolonizing community service learning (e.g., Mitchell 2008 and Santiago-Ortiz 2019). It is clear from these works that service learning should never be decoupled from a critical examination of the histories and power structures that have shaped communities. For this reason, the anti-racist and social change perspective of the college curriculum is indispensable for the engagement aspect. As Schulz (2007:34) notes, “… it takes the concerted effort of interdependent stakeholders (community members, students, and instructors) to transform social justice theory into service-learning practice.”
Santiago-Ortiz (2019) notes that an approach based in critical community service learning, while a necessary first-step, is insufficient unless we understand the position of the university in colonial hierarchies. In other words, how can we “reimagine the conditions for ethical encounters with others that challenge present conditions of colonization and inequality?” (Gaztambide-Fernández 2012:50). This requires that student projects engage communities as equal participants and be based on equitable partnerships in order to counter the privileging of a student agenda.

Indeed, the scaffolding provided by Engagement 1-3 (and 110 for transfer students) is designed to train students on the nature and history of structural racism, provide tools for understanding one’s own identity in relation to those of others, and use these concepts in developing ethical community engagement. All of this is to prepare students for the capstone project with background that allows for critical community engagement that forms part of an ethical and equitable partnership.

Creating partnerships. As mentioned above, the workgroup surveyed faculty who have been engaged in community-based work and invited some to discuss their experiences with the group. Two important themes emerged: (i) the work can be highly impactful and (ii) a great deal of labor is required to create and maintain equitable community relationships. Eighth College will require the resources to create these relationships and to interface with other units that have already established them. The college proposal includes staff positions dedicated to this. However, the group also sees this as an opportunity for the campus to consider creating infrastructure around these partnerships – that is, building university capacity to support the capacity of Eighth college, as well as other units. This might take the form of a campus-wide community-engagement advisory committee. Such a committee would also provide an opportunity to engage community voices in the establishment of equitable partnerships. Initial conversations with academic units and the Changemaker Institute have begun and there seems to be considerable enthusiasm for creating a larger community-engaged infrastructure. Crucially, this committee must include community voices as well. We plan to begin discussions this academic year and continue as Eighth College ramps up to its upper-division courses (in 2025).

This committee can also help navigate the existing connections and create new ones, as the Eighth College capstone will increase demand. At steady state, the Engagement 120 will serve about 1333 students (approximately half of the upper-division students). Assuming group projects at 4-6 students, this would require 266 placements. Some may complete their capstones in their major and students may engage with communities both within and external to UC San Diego. The possibility of campus-
based community projects may mitigate some of the work around establishing new partnerships. However, close collaborations with other academic units will be essential to set priorities and ensure that the needs of all are met. Note that there is time for these conversations to take place, as Eighth College will not offer its capstone course until Fall 2025.

Faculty also comment on the resources – both in terms of faculty/staff and money to manage a program of this size; see Section 7 for discussion.

f. Well-Being and Community
The Engagement & Community theme presents an opportunity to explore the wellness of communities as it relates to the wellness of individuals in the context of their social, economic, and cultural histories. These factors underlie significant economic, inclusion, health, and well-being disparities, which form fundamental aspects of structural racism. Thus, the structures that have shaped and continue to shape communities create systems that relate to the wellness of their members; the synergy between the community and individual in this context can inform content in the college’s general education curriculum.

With an aim of orienting students toward engagement, the college can promote a process of self-engagement and self-awareness to strengthen their own well-being as a prerequisite for contributing to healthy communities. On the individual level, this academic process of self-discovery will include topics of physical and mental health, understanding and exploring identity, and core skills of equitable communication, interaction, and connection. Self-awareness of one’s position with respect to privilege, power, and identity forms the basis of the campus’ Diversity, Equity, and Inclusion graduation requirement; these goals can be further explored in the context of individual and community well-being. On the community level, inquiry into the nature of structural racism; civic engagement; policy- and institutional-based social exclusion and marginalization; loneliness and social networks; healthcare; food and housing security; and environmental justice bear on community wellness. This academic work will address what it means to be healthy – on both levels - in the contemporary, multicultural context.

g. Addressing structural racism
In Spring 2020, the murder of George Floyd, Breonna Taylor, Daniel Prude, and countless other African American people, as well as Black Lives Matter activism, has caused the university to examine how structural racism and anti-Blackness is woven into the fabric of the institution. Our students have been leaders in this area: The Black Student Union and the Black Graduate Student Association issued a list of demands
that focus on ways to address structural racism on our campus. This has prompted the Associated Students, the Graduate and Professional Student Association, the Academic Senate, academic schools, the undergraduate colleges, and other campus units to self-evaluate and ask what changes might address these demands and the underlying problems they address.

One demand focuses on creating a college that is “dedicated to the celebration, education, and history of Black culture in a safe space offering humanities programming, African Diaspora courses, and Black centered events.” This should be true of all colleges and each college is now examining its curriculum and programming with this demand in mind. However, with Eighth College, we have a unique opportunity to build an academic unit where the confrontation of structural racism, as well as the celebration of the cultures of Black people and other people of color, is part of the original design. The Engagement & Community theme is well-aligned with this goal; the Eighth College Engagement Program curriculum can be a vehicle for addressing structural racism, while creating an environment where Black scholars and other scholars of color thrive. It is important to note that this is intended to complement the anti-racist work in the other colleges, leading to a pan-college synergy in addressing structural racism and anti-Blackness.

Bailey, et al. (2017:144) define ‘structural racism’ as follows:

*The totality of ways in which societies foster racial discrimination, through mutually reinforcing, inequitable systems . . . (e.g., in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, etc.) that in turn reinforce discriminatory beliefs, values, and distribution of resources . . . and is reflected in history, culture, and interconnected institutions.*

Similarly, Kendi (2019) notes that concepts such as ‘structural’ and ‘systemic’ racism are based in racist actions, which, in turn, stem from participating in racist policies. Thus, we propose that the Engagement Program include an interdisciplinary curricular focus that examines these policies, as well as work on Blackness and Indigeneity across the Americas and the diaspora including, but not limited to, relevant work in history, psychology, medicine, political science, education, and ethnic/decolonial studies. Engagement courses might vary in topics – if this is the case, different academic areas might be represented in different instantiations, but always with the social justice and anti-racist content.

As UC San Diego strives to become a Hispanic-Serving Institution, it is worth noting that Engagement & Community theme also aligns with the focus on many HSI efforts.
Questions of ‘servingness’ are at the heart of much of this proposal. Note that community-engaged work might be local to the San Diego area, but could also entail other communities, including in Mexico and elsewhere. Indeed, the college theme offers an opportunity to continue to engage more intentionally with diverse communities in the border region.

iv. Academic and co-curricular synergies
A particular strength of the UC San Diego college system is the way academic and student affairs combine in relatively small learning communities. The student affairs staff fosters growth by promoting co-curricular activities that include student government, organizations, leadership opportunities, and cultural events. A number of these typically draw inspiration from the college theme. UC San Diego has instituted the Co-Curricular Record, which allows students to document many of these activities. Recognizing that student development and growth happens both within and outside of academic programs, the college will provide staff dedicated to this important aspect of the college experience.

Through the Engagement & Community theme and the corresponding anti-racist curriculum, there may be additional opportunities to create an active community of scholars: Eighth College can function as a meeting place for faculty and students committed to ending structural racism, anti-Blackness, and colonialism. In addition to those affiliated with Eighth College, faculty from across the campus could be invited to participate: affiliated faculty would be linked in through the college’s faculty executive committee and a faculty advisory committee for the Engagement Program; faculty from across campus might teach general education courses and participate in the broader community of anti-racist scholars. Formal connections between the college and the Black Academic Excellence Initiative and related interdisciplinary programs, and organized research units might also be explored.

In addition to the academic program and the community of scholars, the advising, student affairs, and residential life aspects of the college should adopt inclusive practices and recruitment strategies to promote diverse leadership that is in alignment with combating structural racism. Co-curricular programming forms an important aspect of creating community, as will any art installations. Again, it is crucial that these align with the college’s theme and commitment to social justice. Given that retail and dining are part of the college capital project, engagement with Black- and Latinx-owned businesses, as well as incorporation of food options and merchandise of interest to Black students and other students of color, can further the college’s anti-racist climate through intentional inclusivity.
It is of utmost importance that the college not lose sight of these commitments. The governing structures, including faculty executive and advisory committees, as well as the student college council, should be charged with monitoring and scrutinizing curricula, programming, infrastructure, and climate to ensure that the college’s anti-racist and pro-Black character remains fundamental.

4. Inclusive Pedagogy
While themes of equity, diversity, and inclusion are integral to the college theme and general education curriculum, the college will need to ensure that inclusive and anti-racist pedagogical practices are employed in the engagement curriculum. In addition, the college should monitor these practices in alternatives courses. Existing colleges have been at the forefront of creating inclusive academic environments. Faculty and TAs undergo regular training on anti-racist pedagogy and a few colleges have been employing contract grading practices. Most recently, Seventh College has moved to this innovative strategy with excellent results. As students are able to create contracts around their grades, much of the grade pressure is removed. Many report that instead of stressing over their grades, they can relax and concentrate on the material and learning. Under this approach, students chose from different levels of engagement, depending on the grade they aspire to. Rather than grading assignments, instructors and IAs note how the work aligns with the contract. In Seventh College, all students in all Synthesis courses participate in these contracts; Eighth College’s Engagement Program director will determine how to implement this in the Engagement courses.

In addition, an inclusive pedagogical environment and sensitivity to the experiences of first-generation and under-represented students will be particularly important, given the community-based capstone project. Mitchell and Donahue (2009) discuss the challenges that service learning courses pose when there are diverse student backgrounds. In particular, students of color may find themselves having to navigate complexities that others are not aware of. Instructors will need to understand these dynamics as they guide students through the process.

5. Impact on Existing Academic Programs
With Eighth College’s founding, there will be eight undergraduate colleges, each with its own theme and general education curriculum. While all have different themes, there are clear similarities – e.g., Muir’s emphasis on sustainability has similarities with Seventh’s ‘Changing Planet’ theme. Seventh and Eighth Colleges – whose curricula are informed by the same general education literature – have similar structures. Eighth College’s Engagement Program overlaps with Marshall’s Dimensions of Culture to some extent. All colleges are looking at creating anti-racist curricula. These overlaps are off-set with clear differences. The addition of Eighth College provides an additional
option for UC San Diego undergraduates, while ensuring that students from all colleges have a quality intellectual experience in their general education.

Because Eighth College, like the other seven colleges, relies on courses from existing departments and programs for breadth requirements, there is clearly a potential impact on these departments, though this will be countered by the fact the fact that the other colleges’ cohorts will be decompressed as Eighth reaches steady state. All of the sample alternatives courses in Appendix C have been approved by their academic units. Appendix E includes letters of support.

Several academic units participate in community-based pedagogy. Eighth College provides an opportunity for synergy with these units. By allowing overlap in requirements and creating a university-community committee, we do not anticipate that Eighth College will negatively impact the work elsewhere – indeed, the opposite. Note that these units (including Communication, Education Studies, Human Development Sciences, Public Health, and Urban Studies and Planning) all strongly support this academic plan.

6. Evaluation Plan
Over the past two years, several independent threads have come together to bolster campus efforts to use assessment and evaluation to create a more inclusive and student-centered campus:

i. **WSCUC Reaccreditation** – In its 2020 letter reaffirming our campus’ accreditation, the WSCUC articulated, among others, three priorities: (a) increase efforts to assess program learning outcomes and integrate this assessment in the program review process; (b) address opportunity gaps (e.g., disparate rates of four-year graduation, retention, D-F-W rates, etc., when disaggregating along demographic lines); and (c) assess and align the several student success initiatives.

ii. **Collective impact approach to student success** – In response to the WSCUC requirements, the Executive Vice Chancellor launched a collective impact initiative in 2021. The focus of this is to help align campus efforts towards student success, using common goals and metrics.

iii. **Revised program review guidelines** – In response to Black student demands in the wake of the George Floyd murder, the Undergraduate Council integrated the requirement to address opportunity gaps and create an inclusive academic environment in the guidelines for program review self-studies and for the program review committee charges.

iv. **Assessment cycle** – Building on both the EVC’s collective impact and Undergraduate Council’s initiatives, the Division of Undergraduate Education
and the Teaching + Learning Commons have collaborated on creating assessment cycles for departments and programs. These are intended to happen at regular intervals between program reviews and ground the assessment of program learning outcomes in opportunity gaps. This process is aligned withWSCUC requirements, the collective impact initiative, and UGC’s revised review guidelines. The Division of Undergraduate Education provides data to units to facilitate this assessment.

Eighth College, like all academic units, will participate in these assessment cycles and program reviews. The college will collaborate with the Commons to develop a sustainable assessment plan, geared towards addressing opportunity gaps. Note that several other colleges have designed assessments of their writing and core programs (e.g., Warren, Muir, and Sixth); Eighth College can build on this experience.

As Eighth College develops, we also propose engaging focus groups of students, community members, employers, and – eventually – alumni in assessing the value of the Eighth College curriculum.

7. Academic and Administrative Resources
i. Engagement Program – Resource Needs
Conversations with faculty committed to community-based pedagogy emphasize that this work requires significant resources – in faculty, staff, and budget. Surveys of a few such programs can help provide a benchmark for Eighth College’s Engagement program. However, experiences and resources vary widely, as do costs.

Perhaps the largest current program is Education Studies’ Partners at Learning (PAL) program. This program provides 450-500 students opportunities to work with underserved P-12 students and schools om 19.5 courses a year. In addition to faculty and instructional assistants, the program has a 33% academic coordinator, 60% program advisor, and 10% HR support. The program points out that this level of support is insufficient. While the campus once provided transportation (first as a dedicated van, then Lyft vouchers), this is no longer available. Therefore, there is no additional budget items, to the detriment of the program (i.e., students are essentially on their own for transportation). They estimate that 12K per year might cover transportation.

Urban Studies and Planning has several smaller programs that provide community-based learning opportunities – ranging from 20 to 40 students. These include courses and related community work on health aging (Life Course Scholars Program), homelessness (Urban Challenges: Homelessness in San Diego), climate change (Climate Action Scholars Program), and the Mexican Migration Field Research Program. Some of these are purely pedagogical; others have an additional research component. The department dedicates a portion of a staff position to overseeing the program, but faculty, including Unit-18 lecturers bear much of the
responsibility. These programs do incur significant expenses associated with travel, stipends, meals, among other things. It is hard to break these down precisely, but depending on the program, they can cost from 5K to many thousands. Various sources contribute to these costs (e.g., extramural funding, development, and faculty funds) – there is no stable funding source.

There are several lessons in these comparisons. First, there needs to be sufficient staff to manage the program. Second, faculty who teach in the program should not be left compensating for insufficient staff support. Finally, there needs to be a budget to cover travel, stipends, and other costs. As colleagues in Urban Studies and Planning point out, these are not optional.

It is difficult to extrapolate from the above two departments, given rather different configurations; however, using the staffing in the PAL program as a benchmark (and bearing in mind that it is insufficient), we might expect that Eighth College should have about two to three times the staff support (PAL has around 500 students/19.5 courses, Eighth College will have 1333, with 266 placements and 44 courses). The following compares the respective staffing, minus the teaching roles of faculty and graduate students:

<table>
<thead>
<tr>
<th>PAL</th>
<th>Eighth</th>
</tr>
</thead>
<tbody>
<tr>
<td>--</td>
<td>Faculty Director: 25% FTE (% dedicated to capstone)</td>
</tr>
<tr>
<td>Academic Coordinator: 33% FTE</td>
<td>Academic Coordinators: 150% FTE (2 dedicated positions, minus teaching obligations)</td>
</tr>
<tr>
<td>Program Director: 60% FTE</td>
<td>Engagement Community Advisor: 100% FTE</td>
</tr>
<tr>
<td>HR Coordinator: 10% FTE</td>
<td>Instruction Coordinator: 25% FTE, TA Coordinator: 25% FTE</td>
</tr>
<tr>
<td>Academic position total FTE: 33%</td>
<td>Academic positions total FTE: 175%</td>
</tr>
<tr>
<td>Staff positions total FTE: 70%</td>
<td>Staff Positions total FTE 150%</td>
</tr>
</tbody>
</table>

The above table illustrates that, Eighth College will have five times the academic support (director and academic coordinators) and over twice the staff support of PAL, putting it into the correct range of support. Details about the roles of the engagement-related staff are in section 7.ii below.

The college have traditionally had fairly small operating budgets, but have also tended to accumulate significant carry-forward balances, largely fueled by salary savings as staff turnover. Even in the last few years, despite spending plans and some unusual expenses, these balances have continued to grow. Much of the programming in the colleges derives from these balances. While Eighth College will not initially have a carry forward, the college will be provided with an initial operating budget of 100K, followed by an additional 200K for the capstone courses in the following years (note that Engagement 120 will not begin until Fall
Some of the money may be used for college programming and other expenses unrelated to the Engagement program. However, the college will not face furniture or renovation costs (as the building and furniture will be new). Thus, the 200K will fund transportation, stipends, and other incidental expenses related to the community-based pedagogy. This should be sufficient for a year or two, after which we will have a better idea of the actual costs, will see what the college system’s carry-forward is, and be able to assess needs and whether other sources (e.g., Academic Affairs, Changemaker Institute, development, extramural) should be explored. This is consistent with how other units have funded these costs and consistent with the current college models.

With the establishment of a committee on engaged pedagogy, we have an opportunity to look at resource issues at the campus level and, perhaps, achieve some economy of scale. Thus, the individual resource needs of the Eighth College program might benefit community-engaged pedagogy across campus.

ii. Engagement Program – Sequencing and Staffing

The general education program will be directed by a teaching professor (L[P]SOE) appointed in the college. The instruction will be supported by this teaching professor, three academic coordinators/Unit 18 lecturers (3 FTE), Senate faculty assigned by their home departments, Unit 18 lecturers, and graduate teaching assistants. The campus is committed to funding at the level that is needed to staff the college’s general education program.

The importance of the Engagement Program director’s role should be emphasized; this will be the academic and thought leader of an innovative and impactful program. The director – in the teaching professor series – will typically teach three courses in the program a year; approximately half of their time will be devoted to program administration. The search for this position will emphasize a background in critical community-engaged pedagogy. Three associate directors will share tasks such as curriculum planning, mentoring of lecturers and teaching assistants, hiring, and community interface. One of these three will be dedicated to writing pedagogy and will have a background in this area. The other two will focus on the community-engaged capstone courses and maintaining community connections. Three additional staff positions will support these efforts; these include an Engagement Community Advisor, an Undergraduate Instruction Coordinator, and a TA coordinator. All of these positions will support the community-based curriculum.

The Engagement Program director is the only Senate faculty member with their primary academic appointment in the college (the provost retains their underlying departmental appointment, with an administrative position in the college). Other Senate faculty who participate in the intellectual life of the college have their primary academic appointment in another unit (e.g., a department). Every General Campus faculty member, and some

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1 In the Eighth College proposal there were two academic coordinator positions; Academic Affairs has since agreed to support three.
in Health Sciences and the Scripps Institution of Oceanography, and the Rady School of Management, is affiliated with one of the undergraduate colleges. As new faculty are recruited to campus, the Council of Provosts (currently the seven college provosts) assigns them to an affiliation with one of the colleges, balancing various factors – e.g., diversity, disciplinary breadth, and alignment with the college theme. Over the next two academic years, we will invite some existing faculty to affiliate with Eighth College; we will also begin to assign new faculty to the college as they are hired.

The campus must always provide resources to accommodate the totality of our undergraduate enrollments; under any scenario, there need to be sufficient faculty to provide general education courses to serve all of our undergraduates. Given our recent increase in undergraduate enrollment, even in the absence of additional colleges, staffing increases would be necessary to offer more sections – both in college core sequences and in departmental alternatives. Establishing Eighth College allows us to channel those necessary staffing increases in ways that will best serve our students, regardless of exactly how its general education sequence is structured. In particular, adopting the interdisciplinary external engagement framework does not pose additional staffing pressure that the campus is not already facing, other than the director, three associate directors, and support staff.

Assuming a steady state enrollment of about 4,000 students, a 2:1 first-year:transfer student ratio, and an idealized four- and two-year graduation rate (for first year and transfer students, respectively), the student population would be broken down as follows in any given year:

- Year 1 students: 666 first years
- Year 2 students: 666 first years
- Year 3 students: 666 first years, 666 transfers
- Year 4 students: 666 first years, 666 transfers

Eighth college would have to offer sufficient sections to cover the following courses each year. The following represents a possible arrangement of courses.

- Fall and Winter: Engagement 1, 666 first year students
- Spring: Engagement 2, 666 first year students
- Fall and Winter: Engagement 3, 666 second year students
- Throughout year: Engagement 110, 666 transfer students
- Throughout year: Engagement 120, 666 first year and 666 transfer students

The staffing of these courses would be similar to the model that Seventh College has established for its Synthesis Program. Beginning in Fall 2022, Seventh is staffing these with Unit-18 lecturers and some Senate faculty. Note that the program director and
some of the associate directors will teach in the program, as may interested faculty from departments. Graduate TAs and – eventually – perhaps undergraduate IAs might be assigned to support multiple sections (2-3, depending on enrollments). In the case of the capstone 120 course, these graduate TAs can further support the community engaged aspect of the program. Engagement 1 can follow a more traditional lecture/discussion section format.

Table X: Sequencing and course enrollments based on Unit18/faculty staffing

<table>
<thead>
<tr>
<th>Engagement</th>
<th>Annual Enrollment</th>
<th>Students Per Class</th>
<th>Number of Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement 1</td>
<td>666</td>
<td>222</td>
<td>3 (21 sections)</td>
</tr>
<tr>
<td>Engagement 2</td>
<td>666</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Engagement 3</td>
<td>666</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Engagement 110</td>
<td>666</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Engagement 120</td>
<td>1332</td>
<td>30</td>
<td>44</td>
</tr>
</tbody>
</table>

**Fall:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Course enrollment</th>
<th># of sections needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement 1</td>
<td>444</td>
<td>2 (15 discussion sections)</td>
</tr>
<tr>
<td>Engagement 3</td>
<td>333</td>
<td>17</td>
</tr>
<tr>
<td>Engagement 110</td>
<td>222</td>
<td>11</td>
</tr>
<tr>
<td>Engagement 120</td>
<td>444</td>
<td>15</td>
</tr>
</tbody>
</table>

2 The writing-intensive courses are set at 20 and the capstones at 30. The introductory Synthesis 1 courses have a lecture at 222, with about 7 discussion sections each.
Winter:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course enrollment</th>
<th># of sections needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement 1</td>
<td>222</td>
<td>7</td>
</tr>
<tr>
<td>Engagement 3</td>
<td>333</td>
<td>16</td>
</tr>
<tr>
<td>Engagement 110</td>
<td>222</td>
<td>11</td>
</tr>
<tr>
<td>Engagement 120</td>
<td>444</td>
<td>15</td>
</tr>
</tbody>
</table>

Spring:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course enrollment</th>
<th># of sections needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement 2(^3)</td>
<td>666</td>
<td>33</td>
</tr>
<tr>
<td>Engagement 110</td>
<td>222</td>
<td>11</td>
</tr>
<tr>
<td>Engagement 120</td>
<td>444</td>
<td>14</td>
</tr>
</tbody>
</table>

To implement the academic plan, the Director should be one of the first hires of Eighth College. They will need time to create and implement the Engagement course curriculum, hire and onboard both the administrative and teaching staff, create materials to educate those in and out of the program about the mission and goals of the program, and collaborate with members of Senior Staff to create the mission and structures of Eighth College. At least one associate director should be hired before the launch of the

\(^3\) The Director may decide to offer a few sections of Engagement 2 in the Fall quarter or over the summer for students who are unable to take the course during the Spring quarter and to make sure the sequencing lines up with time to degree.
Engagement Program to oversee the day-to-day needs of the lower division courses while the Director continues to create and launch the Engagement Program. Below is a table that highlights some of the tasks of the Director. This is not meant to be an exhaustive list of tasks rather to highlight the importance of hiring the Director and one associate director before the Program launches. In the event that the director is not in place during the year prior to the college launch, the provost, with support from the Division of Undergraduate Education, will carry out these duties.

Note that the upper-division capstone course will not launch until Fall 2025. This provides a ramp to bring together college staff, as well as campus and community partners to create the infrastructure necessary to launch the capstone courses.

Table Y: Director tasks to Launch Engagement Program

<table>
<thead>
<tr>
<th>Year before first courses launch</th>
<th>Tasks needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>● Create curriculum for Engagement 1 &amp; 2</td>
</tr>
<tr>
<td></td>
<td>● Submit courses for approval</td>
</tr>
<tr>
<td></td>
<td>● Hire first Associate Director, Undergraduate Instruction Coordinator, and TA Coordinator</td>
</tr>
<tr>
<td></td>
<td>● Hire Unit 18 lecturers and TAs for Engagement 1 &amp; 2</td>
</tr>
<tr>
<td></td>
<td>● Create orientation, website, and other materials for messaging about the program</td>
</tr>
<tr>
<td></td>
<td>● Outreach to campus units and community partners for infrastructure for Engagement 120</td>
</tr>
<tr>
<td></td>
<td>● Collaborate with Senior Staff to create mission and structures of the College</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 of the Program</th>
<th>Tasks needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>● Launch Engagement 1 &amp; 2</td>
</tr>
<tr>
<td></td>
<td>● Teach Engagement courses</td>
</tr>
<tr>
<td></td>
<td>● Create curriculum for Engagement 3</td>
</tr>
</tbody>
</table>
| Year 2 of the Program | • Hire Associate Directors for Engagement 120 and Engagement and Community Advisor  
• Hire lecturers and TAs for Engagement 3  
• Work with Associate Directors, as well as campus and community partners to set up infrastructure for Engagement 120 |
|---|---|
| Year 3 of the Program | • Launch Engagement 3  
• Teach Engagement courses  
• Create curriculum for Engagement 120  
• Hire Program Coordinator for Engagement 120  
• Begin recruiting faculty (Unit-18 and Senate faculty) to teach Engagement 110 and 120  
• Work with Associate Directors, as well as campus and community partners to set up infrastructure for Engagement 120 |

### iii. College Leadership, Staff, Faculty and Operating Resources

As is the case with other colleges, Eighth College will be led by a faculty provost who manages a team of professionals in the college academic program, academic advising, student affairs, and residential life.

All general campus faculty (as well as some faculty from Scripps Institution of Oceanography and Health Sciences) are affiliated with a college (while holding appointments in their home departments or other academic units). Furthermore, each
college has faculty from the full range of academic disciplines. Between Spring and Fall 2022, the campus will recruit existing faculty to form the founding faculty of Eighth College, pending Regents’ approval (expected in May 2022). The size of the Eighth College faculty will increase as new faculty are hired to campus and should, eventually, grow to the level found in the other colleges.

A search for the Eighth College provost will take place in Fall 2022; this will be a campus-internal search limited to tenured Senate faculty. The provost will nominate a faculty Executive Committee from the Eighth College-affiliated faculty, who are elected by the college faculty. The provost and executive committee will draft the Senate Regulation and college by laws. These will require ratification by the college faculty and the Divisional Academic Senate.

In parallel, searches for the Engagement Program Director, Dean of Academic Advising, Dean of Student Affairs, and Director of Residential Life have been launched. We expect that the provost will be on board to weigh in on these searches as they conclude around the end of Fall 2022 or early Winter 2023. At steady state we expect approximately 30 staff FTE. The staff would be phased in as the incoming students are added reaching a steady state in four years. The following is a sample organizational chart for Eighth College.4

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4 The chart lists a single Associate Director Engagement & Community – this should include two such positions.
Two sources of revenue would support Eighth College. The administration, academic program, and student affairs staffing would be supported by the campus core funds (state, tuition and student service fees). As a point of comparison: at a steady state of 4,000 students, the students in Eighth College would generate approximately $70M in resident tuition, non-resident supplemental tuition, and state support to the campus; the incremental core fund cost increase for operating Eighth College (instead of including those same students within the other seven colleges) is about $1.05M, just over 1.5% of that revenue. This figure includes the salaries and benefits for the net new staff positions. Incidental costs for the Engagement Program will be provided by a programmatic fund (see discussion above). The residential life program would, per typical practice, be supported by student housing income, and would be included in the housing fees charged to residents of campus housing.

References
Mitchell, Tania D. and David M. Donahue. 2009. “I do more service in this class than I ever do at my site” Paying attention to the reflections of students of color in service-


Submitted by the Senate-Administration Eighth College Academic Plan Workgroup:

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Hailey Caraballo, Project Policy Analyst, Division of Undergraduate Education
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Amanda Solomon, Director, Dimensions of Culture, Marshall College
William Wei, Campus-wide Senator
Appendix A - Conformity to Academic Senate Regulations for College General Education Requirements

The following summarizes the Divisional Academic Senate’s approved general education guidelines:

**Guidelines for College General Education Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>BA/BS in Arts and Sciences</th>
<th>BS in Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Number of Courses for a college’s general education (GE) requirement</td>
<td>At least 14 4-unit courses</td>
<td>At least 12 4 –unit courses</td>
</tr>
<tr>
<td>Limit on Overlapping Courses with a Major</td>
<td>At least 11 GE courses outside the requirements specified by student’s major</td>
<td>At least 9 GE outside the requirements specified by student’s major</td>
</tr>
</tbody>
</table>
| Breadth Requirement | • At least 11 of the 14 GE courses must be taken from a minimum of four departments or programs.  
• Courses required by the student’s major will not count toward the breadth requirement  
• Writing program sequence will count as one area outside the student’s major to fulfill this requirement | • At least 9 of the 12 GE courses must be taken from a minimum of four departments or programs.  
• Courses required by the student’s major will not count toward the breadth requirement  
• Writing program sequence will count as one area outside the student’s major to fulfill this requirement |
| Writing Requirement | At least 5 courses (including GE and courses in the major) must require writing a paper or papers. |
| College Requirements | Optional: Specify more than these minimum requirements and/or require certain course sequences or course distributions, as long as they are consistent with the above four requirements |

The proposed academic plan meets these guidelines as follows:

i. Minimum number of courses:
   Ten alternatives and four engagement courses (three lower-division and one upper-division), = 14 courses.

ii. Limit on overlapping:
   At most three courses can overlap with major courses. That is, three courses taken to fulfill major requirements may be used to also satisfy alternatives requirements. These courses do not need to be in the list of approved alternatives courses, but each should be in one of the five alternatives areas.

iii. Breadth requirement:
   - Because the alternatives courses must cover five areas (Arts, Humanities, Natural Sciences & Engineering, Social Sciences, and Quantitative)

| Must require graduates to meet minimal requirements in Humanities/Fine Arts, Social Sciences, and Mathematics/Natural Sciences | Must require graduates to meet minimal requirements in Humanities/Fine Arts, Social Sciences, and Mathematics/Natural Sciences |

| Writing Requirement | At least 5 courses (including GE and courses in the major) must require writing a paper or papers. |
| College Requirements | Optional: Specify more than these minimum requirements and/or require certain course sequences or course distributions, as long as they are consistent with the above four requirements |

| Writing Requirement | At least 5 courses (including GE and courses in the major) must require writing a paper or papers. |
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| College Requirements | Optional: Specify more than these minimum requirements and/or require certain course sequences or course distributions, as long as they are consistent with the above four requirements |
Reasoning), they will be necessarily in at least four departments or programs.

- Aside from the permitted three-course overlap, major requirements will not count towards breadth requirements (alternatives).
- The engagement courses will be housed in the college and outside the major.
- Humanities/Fine Arts, Social Sciences, and Mathematics/Natural Sciences are all represented in the alternatives requirements.

iv. Writing requirement
Two of the lower-division engagement courses will include writing papers. Three of the alternative courses or course work in the student’s major must include significant writing. The Provost’s Office will maintain an updated list of courses taught across the curriculum that include an appropriate amount of writing.

v. College requirements
Two courses are required from each of the following areas: Arts, Humanities, Natural Sciences & Engineering, Social Sciences, and Quantitative Reasoning. Students must complete three lower-division and one upper-division engagement courses.

Additional graduation requirements
a. The minimum requirement for graduation with the degrees of Bachelor of Arts or Bachelor of Science will be completion of 180 units with a cumulative grade point average of 2.0 (C) or higher. At least 60 of these units must be completed at the upper-division level.

b. At least nine of the last eleven courses passed (or 36 of the last 44 units passed) must be taken as an Eighth College student.

c. One course must satisfy the campus Diversity, Equity, and Inclusion requirement.

Degrees
Eighth College will recommend candidates for the degree of Bachelor Arts or Bachelor of Science, with designation as to major. Double majors will be permitted, consonant with regulations of the Educational Policy Committee (EPC).
Appendix B: Eighth College General Education Requirements - Summary

<table>
<thead>
<tr>
<th>Alternatives</th>
<th># Units per course</th>
<th>Units</th>
<th># Courses</th>
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<td>Arts</td>
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<tr>
<td>Humanities</td>
<td>4-4</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>4-4</td>
<td>8</td>
<td>2</td>
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<tr>
<td>&amp; Engineering</td>
<td></td>
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</tr>
<tr>
<td>Social Sciences</td>
<td>4-4</td>
<td>8</td>
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<td>Quantitative reasoning</td>
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Appendix C: Eighth College Alternatives – Examples

The following are examples of courses that may satisfy the Alternatives requirements in each of the five categories. A final curated list will be developed by the Eighth College Executive Committee and submitted to the Undergraduate Council for approval. The courses are generally chosen based on alignment with the college theme, although some of the courses are more foundational (e.g. those in quantitative reasoning). All have been approved by their departments.

**Arts**

*African American Studies*
AAS 192 Special Topics in Art- *pending course- not yet in catalog*

*Critical Gender Studies*
CGS 150 Visuality, Sexuality, and Race (ETHN 150)

*Ethnic Studies*
ETHN 108 Race, Culture and Social Change (MUS 151)
ETHN 114A Representing Native America
ETHN 120 Race and Performance: The Politics of Popular Culture
ETHN 128 Hip Hop: The Politics of Culture (MUS 152)
ETHN 132 Chicana Theatre (TDHT 110)
ETHN 133 Latinx Theatre and Performance (TDHT 111)
ETHN 143 Chicana/o Film and Media Studies
ETHN 146A Ensemble (TDAC 120)
ETHN 150 Visuality, Sexuality, and Race (CGS 150)
ETHN 163F Playing Indian: Native American and First Nations Cinema (TDGE 131)
ETHN 163G Indigenous Theatre and Performance (TDHT 120)
ETHN 164 African Americans and the Mass Media (MUS 153)
ETHN 177 Race, Sound, and Music
ETHN 178 Blues: An Oral Tradition (MUS 126)
ETHN 179 Discover Jazz (MUS 127)
ETHN 186 Queer of Color Performance- *pending course- not yet in catalog*
ETHN 186R Remote- Queer of Color Performance- *pending course- not yet in catalog*

*History*
HIUS 134 From Bebop to Hip-Hop: African American Cultural History since 1945
HIUS 155  From Zoot Suits to Hip Hop: Race and Popular Cultures Since World War II

Music
MUS 8  American Music: Jazz Cultures
MUS 8GS  American Music: Jazz Between the World Wars (Taught in Paris, France)
MUS 11  Folk Music
MUS 17  Hip-Hop
MUS 19  Blacktronika: Afrofuturism in Electronic Music
MUS 19R  Remote- Blacktronika: Afrofuturism in Electronic Music
MUS 111  Topics: World Music Traditions
MUS 126  Blues: An Oral Tradition (ETHN 178)
MUS 126R  Remote- Blues: An Oral Tradition
MUS 127  Discover Jazz (ETHN 179)
MUS 150  Jazz and the Music of the African Diaspora: Special Topics Seminar
MUS 150GS  Jazz & the Music of the African Diaspora (Taught in Paris, France)
MUS 151  Race, Culture and Social Change (ETHN 108)
MUS 152  Hip-Hop: The Politics of Culture (ETHN 128)

Public Health
FMPH 191  Topics in Public Health- some quarters: "Racism as a Public Health Crisis"

Theatre + Dance
TDAC 120  Chicanx Teatro Ensemble (ETHN 146A)
TDGE 12  Topics in Cinema and Race
TDGE 127  The Films of Spike Lee- pending course- not yet in catalog
TDGE 131  Native American and Indigenous Cinema(ETHN163F)
TDGE 134  Disability and Performative Exploration: Struggle for InclusionTDHT 103  Asian American Theatre
TDHT 107  American Theatre
TDHT 108  Luis Valdez
TDHT 109  African American Theatre
TDHT 110  Chicanx Theatre (ETHN 132)
TDHT 111  Latinx Theatre and Performance (ETHN 133)
TDHT 120  Indigenous Theatre and Performance (ETHN163G)

Visual Arts
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<td>Identity through Transnational Cinemas</td>
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<td>Environmentalism in Art and Media</td>
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<td>VIS 158D</td>
<td>Black Subjects and Black Material in Photography</td>
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**Humanities**

*AFRICA AMERICAN STUDIES*

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<td>AAS 14</td>
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<td>AAS 15</td>
<td>Racism and Global Imperialism- pending course- not yet in catalog</td>
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<td>Legacies of Research on Disenfranchised Communities- pending course- not yet in catalog</td>
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<td>AAS 192</td>
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<td>AAS 193</td>
<td>Special Topics in Social Sciences- pending course- not yet in catalog</td>
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**CRITICAL GENDER STUDIES**

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<td>CGS 119</td>
<td>Asian American Film, Video, and New Media: The Politics of Pleasure (LTCS 119)</td>
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**ENVIRONMENTAL STUDIES**

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<td>Wilderness and Human Values Abroad</td>
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<td>The United States and the Pacific World (HIUS 103)</td>
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<td>Native American Literature</td>
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<td>ETHN 112A</td>
<td>History of Native Americans and Indigenous People in the US I</td>
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<td>ETHN 112B</td>
<td>History of Native Americans and Indigenous People in the US II</td>
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<td>Asian American Literature (LTEN 181)</td>
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<td>Native American Intellectuals in the 20th Century</td>
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<td>Asian American Social Movements (HIUS 125)</td>
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<td>Origins of the Atlantic World c. 1450-1650</td>
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<td>ETHN 175</td>
<td>Literature of the Harlem Renaissance (LTEN 186)</td>
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<td>ETHN 182</td>
<td>Race, Gender, and Sexuality in Fantasy and Science Fiction</td>
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**Global Health**

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**History**

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<td>Jews and African Americans: Slavery, Diaspora, Ghetto</td>
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<td>Race, Sports, and Inequality in the Twentieth Century</td>
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<td>Diversity, Equity, and Inclusion in the United States and Europe: Multiple Multiculturalisms</td>
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<td>American Women, American Womanhood 1870 to Present</td>
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**Latin American Studies**

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<td>LTAM 105</td>
<td>Gender and Sexuality in Latino/a-Chicano/a Cultural Production</td>
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<td>Latino/a Literature in Translation</td>
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<td>Gender, Text, and Culture</td>
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<td>Comparative Issues in Latino/a Immigration in US Literature</td>
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**Philosophy**

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<td>PHIL 50</td>
<td>Law and Society</td>
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<tr>
<td>PHIL 139</td>
<td>Global Justice</td>
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<td>PHIL 148</td>
<td>Philosophy and the Environment</td>
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<td>PHIL 155</td>
<td>Mexican Philosophy</td>
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<td>PHIL 156</td>
<td>Latinx Philosophy</td>
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<td>PHIL 158</td>
<td>Topics in Chinese Philosophy</td>
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<td>PHIL 165</td>
<td>Freedom, Equality, and the Law</td>
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<td>PHIL 170</td>
<td>Philosophy and Race</td>
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<td>Data Ethics (DSC 164)</td>
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**Urban Studies and Planning**

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<tr>
<td>USP 103</td>
<td>The American City in the 20th Century (HIUS 148)</td>
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<tr>
<td>USP 106</td>
<td>The History of Race and Ethnicity in American Cities (HIUS 129)</td>
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**Social Sciences**

**African American Studies**

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<tr>
<td>AAS 193</td>
<td>Special Topics in Social Sciences- pending course- not yet in catalog</td>
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**Anthropology**

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<td>ANBI 131</td>
<td>Biology and Culture of Race</td>
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<tr>
<td>ANSC 104</td>
<td>The US-Mexico Border</td>
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<td>ANSC 105</td>
<td>Global Health and Inequality (GLBH 105)</td>
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<td>ANSC 120</td>
<td>Religion and Culture</td>
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<td>ANSC 129</td>
<td>Meaning and Healing (GLBH 129)</td>
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<td>Native American Health and Healing (GLBH 139)</td>
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<td>Human Rights II: Contemporary Issues (HMNR 101)</td>
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<td>Mental Health as Global Health Priority (GLBH 143)</td>
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<td>Global Health Perspective on HIV (GLBH 146)</td>
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<td>ANSC 147</td>
<td>Global Health and the Environment (GLBH 147)</td>
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ANSC 148  Global Health and Cultural Diversity (GLBH 148)
ANSC 150  Culture and Mental Health (GLBH 150)
ANSC 155  Humanitarian Aid: What is it Good For?
ANSC 162  Language, Identity, and Community
ANSC 180  Capitalism and Gender (CGS 120)
ANSC 185  #BlackLivesMatter (AAS 185)
ANSC 186  Gender and Incarceration (CGS 118)
ANSC 190GS  Medicine and Healing in Southeast Asia (Taught in Bali, Indonesia)
ANSC 196  Human Rights Advocacy Seminar
ANTH 1  Introduction to Culture
ANTH 4  Words and Worlds: Introduction to the Anthropology of Language
ANTH 21  Race and Racisms
ANTH 23  Debating Multiculturalism: Race, Ethnicity, and Class in American Societies
ANTH 24  Mapping Capitalism
ANTH 43  Introduction to Biology and Culture of Race
ANTH 101  Foundations of Social Complexity
ANTH 103  Sociocultural Anthropology
ANTH 104  Transforming the Global Environment
ANTH 105  Climate Change, Race, and Inequality
ANTH 108  Indigenous Peoples, Extractive Development, and Climate Change
ANTH 109  Climate Change, Cultural Heritage, and Vulnerability

*Climate Change Studies (SIO)*
CCS 123  Policy and Politics of Climate Change

*Critical Gender Studies*
CGS 2A  Introduction to Critical Gender Studies: Key Terms and Concepts
CGS 2B  Introduction to Critical Gender Studies: Social Formations
CGS 100A  Conceptualizing Gender: Theoretical Approaches
CGS 100B  Conceptualizing Gender: Methods and Methodologies
CGS 101  Gender and Globalization
CGS 105  Queer Theory
CGS 106  Gender and the Law
CGS 110  Intersectional Struggles for Environmental Justice
CGS 111  Gender and the Body
CGS 112  Sexuality and Nation (ETHN 127)
CGS 114  Gender, Race, Ethnicity, and Class(ETHN 183)
CGS 118  Gender and Incarceration (ANSC 186)
CGS 120  Capitalism and Gender (ANSC 180)
CGS 125     Women of Color Writers
CGS 126     Muslims on Gender and Sexuality
CGS 147     Black Feminisms, Past and Present (ETHN 147)
CGS 165     Gender and Sexuality in African American Communities (ETHN 165)
CGS 187     Latinx Sexualities (ETHN 187)

Cognitive Science
COGS 2     Cognitive Neuroeconomics
COGS 10    Cognitive Consequences of Technology
COGS 11    Minds and Brains
COGS 12    Language, Culture, and Cognition
COGS 15    What the *#!?: An Uncensored Introduction to Language
COGS 20    Exploring the Musical Mind (MUS 20)
COGS 100   Cyborgs Now and in the Future
COGS 111   Beauty and the Brain
COGS 112   Humor
COGS 123   Social Computing
COGS 144   Social Cognition: A Developmental and Evolutionary Perspective
COGS 151   Analogy and Conceptual Systems
COGS 155   Gesture and Cognition
COGS 174   Drugs: Brain, Mind, and Culture

Communication
COMM 10    Introduction to Communication
COMM 30    Digital Media Literacy: Analyzing Forms, Practices, and Infrastructures of Mediated Public Life
COMM 102C  Practicum in New Media and Community Life
COMM 106E  Data Science & Society
COMM 110M  Communication & Community
COMM 111B  Communication and Conflict
COMM 111C  Cities and the Politics of Space
COMM 114A  Human Rights II: Contemporary Issues- pending course- not yet in catalog
COMM 114B  Human Rights Advocacy: Journalists, Activists and Scholars At Risk- pending course- not yet in catalog
COMM 114D  New Media, Youth and Democracy
COMM 114H  Community-Based Practices in Health Communication- pending course- not yet in catalog
COMM 114I  Media Technologies and & Social Movements
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<tr>
<td>COMM 114N</td>
<td>Communication and the Law: The Body in Law</td>
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<td>COMM 124A</td>
<td>Critical Design Practice/Advanced Studio</td>
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<tr>
<td>COMM 129</td>
<td>Race, Nation &amp; Violence in Multicultural California</td>
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<tr>
<td>COMM 177</td>
<td>Culture, Domination &amp; Resistance</td>
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<td><strong>Economics</strong></td>
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<td>ECON 1</td>
<td>Principles of Microeconomics</td>
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<td>Market Imperfections and Policy</td>
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<td>Principles of Macroeconomics</td>
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<td>ECON 101</td>
<td>International Trade</td>
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<td>ECON 129</td>
<td>Cities, Inequality, Innovation</td>
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<td>ECON 130</td>
<td>Public Policy</td>
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<td>ECON 134</td>
<td>The US Social Safety Net</td>
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<td>Corruption</td>
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<td>Economics of Discrimination</td>
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<td><strong>Education Studies</strong></td>
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<td>EDS 112</td>
<td>Urban Education in the United States</td>
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<td>EDS 113</td>
<td>Chicanas/os and Latinos in Education: Policy, Practice, and</td>
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<td>Challenges to Equity</td>
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<td>EDS 116</td>
<td>Equity-minded Education</td>
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<td>EDS 117</td>
<td>Language, Culture and Education (SOCI 117)</td>
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<td>EDS 125</td>
<td>History, Politics, and Theory of Bilingual Education</td>
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<td>EDS 126</td>
<td>Social Organization of Education (SOCI 126)</td>
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<tr>
<td>EDS 130</td>
<td>Introduction to Academic Mentoring of Elementary/School Students</td>
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<td>+EDS 139</td>
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<td>EDS 131</td>
<td>Early Childhood Development and Education</td>
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<td>EDS 133</td>
<td>Counseling, Mentoring, and Academic Advising (Preschool through Twelfth Grade)</td>
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<tr>
<td>EDS 135</td>
<td>Working with Newcomer Communities in San Diego</td>
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<td>EDS 136</td>
<td>Introduction to Academic Tutoring of Secondary School Students</td>
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<td>EDS 145</td>
<td>Artsbridge: Integrating the Arts Across the Curriculum</td>
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<td>EDS 146</td>
<td>Mindfulness and Education</td>
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Environmental Studies
ENVR 102 Selected Topics in Environmental Studies
ENVR 110 Environmental Law
ENVR 150 Environmental Justice - pending course - not yet in catalog
ENVR 150GS Environmental Justice (Taught in Santa Cruz, CA) - pending course - not yet in catalog

Ethnic Studies
ETHN 1 Introductions to Ethnic Studies: Land and Labor
ETHN 1R Remote-Introductions to Ethnic Studies: Land and Labor
ETHN 2 Introductions to Ethnic Studies: Circulations of Difference
ETHN 2R Remote-Introductions to Ethnic Studies: Circulations of Difference
ETHN 3 Introductions to Ethnic Studies: Making Culture
ETHN 3R Remote - Introduction to Ethnic Studies: Making Culture - pending course - not yet in catalog
ETHN 100 Premedical Ethnic Studies Writing - pending course - not yet in catalog
ETHN 102 Science and Technology in Society: Race/Gender/Class
ETHN 103 Environmental Racism
ETHN 104 Race, Space, and Segregation
ETHN 105 Ethnic Diversity and the City (USP 104)
ETHN 109 Race and Social Movements
ETHN 110 Cultural Worldviews of Indigenous America
ETHN 112C California Native American History
ETHN 113 Decolonizing Education
ETHN 116 The United States-Mexico Border in Comparative Perspective
ETHN 117 Organic Social Movements
ETHN 118 Contemporary Immigration Issues
ETHN 122 Asian American Culture and Identity
ETHN 123 Asian American Politics
ETHN 126 Contemporary Filipino and Vietnamese American Identities and Communities
ETHN 127 Sexuality and Nation (CGS 112)
ETHN 129 Asian and Latina Immigrant Workers in the Global Economy (USP 135)
ETHN 138 Black and Latinx Crossings
ETHN 140 Comparative Refugee Communities from Vietnam, Laos, and Cambodia
| ETHN 140A | Refugee San Diego |
| ETHN 141 | Gandhi in the Modern World: From Civil Rights to the Arab Spring |
| ETHN 142 | Medicine, Race, and the Global Politics of Inequality |
| ETHN 144 | Antiracist Medicine & New Perspectives in Healthcare- pending course- not yet in catalog |
| ETHN 147 | Black Feminisms, Past and Present (CGS 147) |
| ETHN 151 | Ethnic Politics in America |
| ETHN 152 | Law and Civil Rights |
| ETHN 160 | Global Indigenous Studies |
| ETHN 161 | Black Politics and Protest Since 1941- pending course- not yet in catalog |
| ETHN 163E | Decolonial Theory |
| ETHN 167A or 189 | Decolonial Muslim Feminisms- pending course- not yet in catalog |
| ETHN 183 | Gender, Race, Ethnicity, and Class (CGS 114) |
| ETHN 187 | Latinx Sexualities (CGS 187) |
| ETHN 188 | African Americans, Religion, and the City (USP 132) |

**Global Health**

| GLBH 20 | Intro to Global Health |
| GLBH 103 | Global Health Disparities and the Quest for Global Health Equity |
| GLBH 104 | Humanities, Ethics, and Professionalism: Engaging Moral Imaginaries for Exploring Health and the Human Condition |
| GLBH 105 | Global Health and Inequality (ANSC 105) |
| GLBH 106 | Water, Sanitation, and Hygiene in Global Health |
| GLBH 107 | Refugee Health in Local and Global Contexts |
| GLBH 108 | Hispanic and Latinx Issues in Global Health- pending course- not yet in catalog |
| GLBH 109 | Decolonizing Global Health |
| GLBH 110 | Demography and Social Networks in Global Health |
| GLBH 111 | Clinic on the Border: Health Frontiers in Tijuana |
| GLBH 113 | Women's Health in Global Perspective |
| GLBH 129 | Meaning and Healing (ANSC 129) |
| GLBH 139 | Native American Health and Healing (ANSC 139) |
| GLBH 141 | Clinical Perspectives in Global Health |
| GLBH 142 | "When the Field is a Ward." Ethnographies of the Clinic |
| GLBH 143 | Mental Health as Global Health Priority (ANSC 143) |
| GLBH 146 | Global Health Perspective on HIV (ANSC 146) |
| GLBH 147 | Global Health and the Environment (ANSC 147) |
| GLBH 148 | Global Health and Cultural Diversity (ANSC 148) |
| GLBH 150 | Culture and Mental Health (ANSC 150) |
GLBH 160  Global Health Policy
GLBH 173  Substance Use and Global Mental Health: Case Studies for Research and Praxis
GLBH 181  Essential of Global Health
GLBH 171R  Global Mental Health

*Human Developmental Sciences Program*

HDS 1  Introduction to Human Development Science
HDS 170  Equity and Diversity Practicum - *pending course - not yet in catalog*
HDS 173  Race, Media, and Identity Development Across the Lifespan

*History*

HITO 119  Introduction to Human Rights and Global Justice (HMNR 100/ SOCI 174)

*Human Rights and Migration Minor*

HMNR 100  Introduction to Human Rights and Global Justice (SOCI 174/ HITO 119)
HMNR 101  Human Rights II: Contemporary Issues (ANSC 140)

*Latin American Studies*

LATI 10  Reading North by South: Latin American Studies and US Liberation Movements
LATI 180  Special Topics - Action & Knowledge: "Breaking the Monopoly with Community-Oriented Research"
LATI XXX  Decolonial Thought and Practice in Latin America - *pending course - not yet in catalog*

*Linguistics*

LIGN 7  Sign Language and Their Cultures
LIGN 8  Languages and Cultures in America
LIGN 9GS  Sign Languages and Deaf Culture in the US and France (Taught in Paris, France)
LIGN 149GS  The Historical Roots of American Sign Language
LIGN 152  Indigenous Languages of the Americas
LIGN 174  Gender and Language in Society (SOCI 116)
LIGN 175  Sociolinguistics
LIGN 178  Spanish Sociolinguistics

*Rady School of Management*

MGT 16  Personal Ethics at Work
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<td>MGT 18</td>
<td>Managing Diverse Teams</td>
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<tr>
<td>MGT 102</td>
<td>E-Commerce</td>
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<td>MGT 103</td>
<td>Product Marketing and Management</td>
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<td>MGT 108R</td>
<td>Applied Market Research</td>
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<td>MGT 121A</td>
<td>Innovation to Market A</td>
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<td>MGT 121B</td>
<td>Innovation to Market B</td>
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<tr>
<td>MGT 128/128R</td>
<td>Business Innovation and Growth</td>
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<td>MGT 146</td>
<td>Ethics in Accounting</td>
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<td>MGT 147</td>
<td>Not for Profit and Government Accounting</td>
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<td>MGT 164</td>
<td>Business and Organizational Leadership</td>
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<td>MGT 166</td>
<td>Business Ethics and Corporate Social Responsibility</td>
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<td>Social Entrepreneurship</td>
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<td>MGT 171</td>
<td>Operations Management</td>
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<td>MGT 172/172R</td>
<td>Business Project Management</td>
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<td>MGT 173</td>
<td>Project Management: Health Services</td>
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<td>MGT 180</td>
<td>Business Finance</td>
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<td>MGT 181</td>
<td>Enterprise Finance</td>
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<td>MGT 187</td>
<td>New Venture Finance</td>
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**Political Science**

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<td>POLI 100I</td>
<td>Participation and Inequality</td>
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<td>POLI 100O</td>
<td>Perspectives on Race</td>
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<td>POLI 100W</td>
<td>Politics, Policy, and Educational Inequality</td>
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<tr>
<td>POLI 102D</td>
<td>Voting Rights Act: 50 years later</td>
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<tr>
<td>POLI 104I</td>
<td>Law and Politics-Courts and Political Controversy</td>
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<td>POLI 104N</td>
<td>Race and Law</td>
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<td>POLI 105A</td>
<td>Latino Politics in the U.S.</td>
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**Multiculturalism**

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<tr>
<td>POLI 117R</td>
<td>Bending the Curve: Solutions to Climate Change</td>
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<tr>
<td>POLI 122</td>
<td>Politics of Human Rights</td>
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<td>POLI 135D</td>
<td>Comparative Politics of Race and Ethnicity</td>
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**Sociology**

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<td>Qualitative Research in Educational Settings</td>
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<td>SOCI 111</td>
<td>Local Lives, Global Problems</td>
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<td>SOCI 117</td>
<td>Language, Culture, and Education (EDS 117)</td>
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<td>SOCI 121</td>
<td>Economy &amp; Society</td>
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<td>SOCI 155</td>
<td>The City of San Diego</td>
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<td>SOCI 169</td>
<td>Citizenship, Community, and Culture</td>
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<td>SOCI 174</td>
<td>Introduction to Human Rights and Global Justice</td>
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<td>(HMNR100/ HITO 119)</td>
<td>SOCI 188GS</td>
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<td>SOCI 1XXGS</td>
<td>Disenchanted Island: Contemporary Problems, Politics and Potentialities (Taught in San Juan, PR) - pending course- not yet in catalog</td>
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**Urban Studies & Planning**

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<td>USP 1</td>
<td>History of US Urban Communities</td>
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<tr>
<td>USP 2</td>
<td>Urban World Systems</td>
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<td>USP 3</td>
<td>The City and Social Theory</td>
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<tr>
<td>USP 100</td>
<td>Introduction to Urban Planning</td>
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<tr>
<td>USP 104</td>
<td>Ethnic Diversity and the City (ETHN 105)</td>
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<tr>
<td>USP 124</td>
<td>Land Use Planning</td>
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<td>USP 128A</td>
<td>Climate Action Scholars: Community Engagement &amp; Research (ANTH 128A)</td>
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<tr>
<td>USP 129</td>
<td>Research Methods: Studying Racial and Ethnic Communities (ETHN 190)</td>
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<td>USP 130</td>
<td>Fieldwork in Racial and Ethnic Communities (ETHN 107)</td>
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<tr>
<td>USP 132</td>
<td>African Americans, Religion, and the City (ETHN 188)</td>
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<td>USP 135</td>
<td>Asian and Latina Immigrant Workers in the Global Economy (ETHN 129)</td>
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<tr>
<td>USP 140</td>
<td>Healthy Placemaking</td>
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<td>USP 141A</td>
<td>Life Course Scholars: Research &amp; Core Fundamentals</td>
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<td>USP 142A</td>
<td>Urban Challenges: Homelessness in San Diego Core Fundamentals</td>
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<td>USP 143</td>
<td>The US Health-Care System</td>
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<td>USP 144</td>
<td>Environmental and Preventive Health Issues</td>
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<td>USP 145</td>
<td>Aging- Social and Health Policy Issues</td>
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<td>USP 147</td>
<td>Case Studies in Health Care Programs/Poor and Underserved Population</td>
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<td>Gentrification</td>
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<td>USP 183</td>
<td>The Geography of American Opportunity (SOCI 183)</td>
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<td>USP 184</td>
<td>Decolonization Design: Histories and Theories</td>
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<td>USP 188</td>
<td>Field Research in Migrant Communities—Practicum (SOCI 188)</td>
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<td>USP 193</td>
<td>San Diego Community Research</td>
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Natural Sciences/Engineering

African American Studies
AAS 191 Special Topics in STEM - pending course- not yet in catalog

Anthropology
ANBI 131 Biology and Culture of Race

Biological Sciences
BILD 1 The Cell
BILD 2 Multicellular Life
BILD 3 Organismic and Evolutionary Biology
BILD 10 Fundamental Concepts of Modern Biology
BILD 12 Neurobiology and Behavior
BILD 20 Human Genetics in Modern Society
BILD 22 Human Nutrition
BILD 28 Immunology/Vaccines- pending course- not yet in catalog
BILD 30 Biology of Plagues: Past and Present
BILD 32 Introduction to Cancer Biology
BILD 36 AIDS Science and Society
BILD 38 Dementia, Science, and Society
BILD 42 Our Sustainable Future
BILD 44 Scientific Perspectives for a Changing World
BILD 46 Ecology of a Changing Planet
BILD 60 Exploring Issues of Diversity, Equity, and Inclusion in Relation to Human Biology
BILD 61 Biology, Race, and Society- pending course- not yet in catalog

Chemistry and Biochemistry
CHEM 4 Chemical Thinking
CHEM 6A General Chemistry I
CHEM 6AH Honors General Chemistry I
CHEM 6B General Chemistry II
CHEM 6BH Honors General Chemistry II
CHEM 6C General Chemistry III
CHEM 6CH Honors General Chemistry III
CHEM 11 The Periodic Table

Computer Science and Engineering
CSE 6R Introduction to Computer Science and Object-Oriented
Programming (Python)
CSE 194 Race, Gender, and Computing

Data Science
DSC 10 Principles of Data Science
DSC 164 Data Ethics (PHIL 174)

Design Lab
DSGN 1 Design of Everyday Things

Electrical & Computer Engineering (ECE)
ECE 16 Rapid Hardware and Software Design

Environmental Studies
ENVR 30 Environmental Issues: Natural Sciences
ENVR 105 Conservation Solutions
ENVR 120 Coastal Ecology
ENVR 136 The Science and Critical Analysis of Environmental Justice—pending course- not yet in catalog

Environmental Systems (SIO)
ESYS 10 Introduction to Environmental Systems
ESYS 103 Environmental Sciences: Challenges and Solutions

Global Health
GLBH 108S The Indigenous Futures Lab (IFL) Field School: Enhancing Ethical Genomic Research with Indigenous Communities

Human Developmental Sciences Program
HDS 175 Power, Wealth, and Inequality in Human Development

Physics
PHYS 1A+1AL Mechanics + Laboratory
PHYS 1B+1BL Electricity and Magnetism + Laboratory
PHYS 1C+1CL Waves, Optics, and Modern Physics + Laboratory
PHYS 2A Physics—Mechanics
PHYS 2B Physics—Electricity and Magnetism
PHYS 2C Physics—Fluids, Waves, Thermodynamics, and Optics
PHYS 2D Physics—Relativity and Quantum Physics
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 4A</td>
<td>Physics for Physics Majors—Mechanics</td>
</tr>
<tr>
<td>PHYS 4B</td>
<td>Physics for Physics Majors—Fluids, Waves, Statistical and Thermal Physics</td>
</tr>
<tr>
<td>PHYS 4C</td>
<td>Physics for Physics Majors—Electricity and Magnetism</td>
</tr>
<tr>
<td>PHYS 4D</td>
<td>Physics for Physics Majors—Electromagnetic Waves, Special Relativity and Optics</td>
</tr>
<tr>
<td>PHYS 4E</td>
<td>Physics for Physics Majors—Quantum Physics</td>
</tr>
<tr>
<td>PHYS 5</td>
<td>Stars and Black Holes</td>
</tr>
<tr>
<td>PHYS 7</td>
<td>Galaxies and Cosmology</td>
</tr>
<tr>
<td>PHYS 8</td>
<td>Physics of Everyday Life</td>
</tr>
<tr>
<td>PHYS 9</td>
<td>The Solar System</td>
</tr>
<tr>
<td>PHYS 10</td>
<td>Concepts in Physics</td>
</tr>
<tr>
<td>PHYS 11</td>
<td>Survey of Physics</td>
</tr>
<tr>
<td>PHYS 12</td>
<td>Energy and the Environment</td>
</tr>
<tr>
<td>PHYS 13</td>
<td>Life in the Universe</td>
</tr>
<tr>
<td>PHYS 30</td>
<td>Poetry for Physicists (LTEN 30)</td>
</tr>
</tbody>
</table>

**Public Health**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMPH 40</td>
<td>Introduction to Public Health</td>
</tr>
<tr>
<td>FMPH 50</td>
<td>Primary Care and Public Health</td>
</tr>
<tr>
<td>FMPH 155</td>
<td>Qualitative Research for Global Public Health</td>
</tr>
<tr>
<td>FMPH 161</td>
<td>Clinical Nutrition in Public Health</td>
</tr>
<tr>
<td>FMPH 191</td>
<td>Topics in Public Health - some quarters: &quot;Racism as a Public Health Crisis&quot;</td>
</tr>
</tbody>
</table>

**Nanoengineering**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NANO 11</td>
<td>Introduction to Nano Engineering</td>
</tr>
</tbody>
</table>

**Scripps Institution of Oceanography (SIO)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIO 1</td>
<td>The Planets</td>
</tr>
<tr>
<td>SIO 3</td>
<td>Life in the Oceans</td>
</tr>
<tr>
<td>SIO 10</td>
<td>The Earth</td>
</tr>
<tr>
<td>SIO 10GS</td>
<td>The Earth (In Iceland)</td>
</tr>
<tr>
<td>SIO 12</td>
<td>History of the Earth and Evolution</td>
</tr>
<tr>
<td>SIO 15</td>
<td>Natural Disasters</td>
</tr>
<tr>
<td>SIO 16</td>
<td>Geology of the National Parks</td>
</tr>
<tr>
<td>SIO 20</td>
<td>The Atmosphere</td>
</tr>
<tr>
<td>SIO 25</td>
<td>Climate Change and Society</td>
</tr>
<tr>
<td>SIO 30</td>
<td>The Oceans</td>
</tr>
<tr>
<td>SIO 35</td>
<td>Water</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>SIO 40</td>
<td>Life and Climate on Earth</td>
</tr>
<tr>
<td>SIO 45</td>
<td>Volcanoes</td>
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<tr>
<td>SIO 45GS</td>
<td>Volcanoes</td>
</tr>
<tr>
<td>SIO 46GS</td>
<td>Global Volcanism</td>
</tr>
<tr>
<td>SIO 50</td>
<td>Introduction to Physical Geology</td>
</tr>
<tr>
<td>SIO 60</td>
<td>Experiences in Oceanic and Atmospheric Sciences</td>
</tr>
<tr>
<td>SIO 75</td>
<td>Geological History of Earth</td>
</tr>
<tr>
<td>SIO 107</td>
<td>Water Pollution</td>
</tr>
<tr>
<td>SIO 109</td>
<td>Bending the Curve: Climate Change Solutions</td>
</tr>
<tr>
<td>(POLI 117)</td>
<td>Bending the Curve: Climate Change Solutions (POLI 117R)</td>
</tr>
<tr>
<td>SIO 109R</td>
<td>Bending the Curve: Climate Change Solutions (POLI 117R)</td>
</tr>
<tr>
<td>SIO 116</td>
<td>Climate Change and Global Health: Understanding the Mechanisms</td>
</tr>
</tbody>
</table>

**Sociology**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 30</td>
<td>Science, Technology, and Society</td>
</tr>
<tr>
<td>SOCI 138</td>
<td>Genetics and Society</td>
</tr>
<tr>
<td>SOCI 149</td>
<td>Sociology of the Environment</td>
</tr>
<tr>
<td>SOCI 168E</td>
<td>Sociology of Science</td>
</tr>
<tr>
<td>SOCI 171</td>
<td>Technology and Society</td>
</tr>
<tr>
<td>SOCI 173</td>
<td>Sociology of Health, Illness, and Medicine</td>
</tr>
</tbody>
</table>

**Quantitative Methods**

**Cognitive Science**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COGS 14B</td>
<td>Introduction to Statistical Analysis</td>
</tr>
</tbody>
</table>

**Computer Science & Engineering (CSE)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 4GS</td>
<td>Mathematical Beauty in Rome</td>
</tr>
<tr>
<td>CSE 20</td>
<td>Discrete Mathematics</td>
</tr>
<tr>
<td>CSE 21</td>
<td>Mathematics for Algorithms and Systems</td>
</tr>
</tbody>
</table>

**Economics**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 5</td>
<td>Data Analytics for the Social Sciences (POLI 5D)</td>
</tr>
</tbody>
</table>

**Education Studies**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDS 102</td>
<td>Introduction to Qualitative Methods in Education Research</td>
</tr>
<tr>
<td>EDS 103</td>
<td>Introduction to Quantitative Methods in Education Research</td>
</tr>
</tbody>
</table>

**Human Developmental Sciences Program**
HDS 60  Introduction to Statistical Analysis

*Mathematics*
MATH 3C  Precalculus
MATH 4C  Precalculus for Science and Engineering
MATH 10A  Calculus I
MATH 10B  Calculus II
MATH 10C  Calculus III
MATH 11  Calculus-Based Introductory Probability and Statistics
MATH 15A  Introduction to Discrete Mathematics
MATH 18  Linear Algebra
MATH 20A  Calculus for Science & Engineering
MATH 20B  Calculus for Science & Engineering
MATH 20C  Calculus and Analytic Geometry for Science and Engineering
MATH 20D  Introduction to Differential Equations
MATH 20E  Vector Calculus
MATH 31AH  Honors Linear Algebra
MATH 31BH  Honors Multivariable Calculus
MATH 31CH  Honors Vector Calculus

*Rady School of Management*
MGT 3  Quantitative Methods in Business
MGT 5  Managerial Accounting
MGT 12  Personal Financial Management
MGT 45  Principles of Accounting
MGT 100  Customer Analytics
MGT 153  Business Analytics

*NanoEngineering (NANO)*
NANO 15  Engineering Computation Using MATLAB
NANO 15R  Engineering Computation Using MATLAB Online

*Political Science*
POLI 5D  Data Analytics for the Social Sciences (ECON 5)
POLI 30D  Political Inquiry

*Sociology*
SOCI 60  The Practice of Social Research
Appendix D: Projected Sample Programs

The following summarizes the Eighth College general education curricula for incoming first time full-time students and transfer students.

**Incoming first-time full-time students**
Alternatives -Two courses each from pre-curated selections from:

- Arts
- Humanities
- Social Sciences
- Natural Sciences & Engineering
- Quantitative Reasoning

Engagement – three lower-division and one upper-division

Year 1: 2-3 alternatives, Engagement 1-2
Year 2: 2-3 alternatives, Engagement 3
Year 3 and 4: remaining 4-6 alternatives, Engagement 120

**Incoming transfer students**
Alternatives – completed through IGETC; otherwise by petition or taken at UC San Diego
Engagement – Engagement 110 & 120

Years 1-2: alternatives, as needed, Engagement 110 and 120

Four-year completion plans are available for all majors and colleges. To test the feasibility of the proposed framework, four-year plans were completed for two majors: Linguistics, with few required courses, and Bioengineering, with significant requirements.

**Linguistics – Four-Year Plan (180 total units):**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall (13 units)</th>
<th>Winter (13 units)</th>
<th>Spring (13 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GE Alternative (4)</td>
<td>GE Alternative (4)</td>
<td>Elective (4)</td>
</tr>
<tr>
<td></td>
<td>Engagement 1 (4)</td>
<td>Elective (4)</td>
<td>Engagement 2 (4)</td>
</tr>
<tr>
<td>Year 2</td>
<td>Fall (13 units)</td>
<td>Winter (16 units)</td>
<td>Spring (16 units)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td></td>
<td>Language Req. (5)</td>
<td>LIGN Elective (4)</td>
<td>LIGN Elective (4)</td>
</tr>
<tr>
<td></td>
<td>LIGN 101 (4)</td>
<td>Engagement 3 (4)</td>
<td>GE Alternative (4)</td>
</tr>
<tr>
<td></td>
<td>GE Alternative (4)</td>
<td>Elective (4)</td>
<td>Elective (4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Fall (16 units)</th>
<th>Winter (16 units)</th>
<th>Spring (16 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIGN Elective (4)</td>
<td>LIGN 111 (4)</td>
<td>LIGN 120 (4)</td>
</tr>
<tr>
<td></td>
<td>LIGN 110 (4)</td>
<td>GE Alternative (4)</td>
<td>LIGN Elective (4)</td>
</tr>
<tr>
<td></td>
<td>GE Alternative/DEI (4)</td>
<td>Elective (4)</td>
<td>Elective (4)</td>
</tr>
<tr>
<td></td>
<td>Elective (4)</td>
<td>Elective (4)</td>
<td>Elective (4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Fall (16 units)</th>
<th>Winter (16 units)</th>
<th>Spring (16 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIGN Elective (4)</td>
<td>LIGN 121 (4)</td>
<td>LIGN 130 (4)</td>
</tr>
<tr>
<td></td>
<td>GE Alternative (4)</td>
<td>GE Alternative (4)</td>
<td>LIGN Elective (4)</td>
</tr>
<tr>
<td></td>
<td>Elective (4)</td>
<td>Elective (4)</td>
<td>Engagemt 120 (4)</td>
</tr>
<tr>
<td></td>
<td>Elective (4)</td>
<td>Elective (4)</td>
<td>Elective (4)</td>
</tr>
</tbody>
</table>

This demonstrates that a major like Linguistics, with the minimum of 48 upper-division units (and relatively few lower-division requirements), can easily accommodate the Eighth College general education requirements, with room for both major requirements and a significant number of electives (which could be used for a minor or towards a double major). Note that this plan assumes an overlap of two Linguistics courses towards the Social Sciences alternatives.

On the other extreme, we created a four-year plan for Bioengineering, which has significant lower-division requirements and 82 units of upper-division requirements. By allowing overlap between major requirements and GE alternatives in quantitative and natural science areas, these students would take only six separate GE alternative courses (one of which could overlap with the campus DEI requirement) and the four engagement courses:

**Bioengineering (BE25) – Four-Year Plan (192 total units):**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall (16 units)</th>
<th>Winter (18 units)</th>
<th>Spring (18 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 20A (4)</td>
<td>MATH 20B (4)</td>
<td>MATH 20C (4)</td>
</tr>
<tr>
<td></td>
<td>CHEM 6A (4)</td>
<td>CHEM 6B (4)</td>
<td>PHYS 2B (4)</td>
</tr>
<tr>
<td></td>
<td>GE Alternative (4)</td>
<td>PHYS 2A (4)</td>
<td>PHYS 2BL (2)</td>
</tr>
<tr>
<td></td>
<td>Engagement 1 (4)</td>
<td>BENG 1 (2)</td>
<td>BILD 1 (4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GE Alternative (4)</td>
<td>Engagement 2 (4)</td>
</tr>
</tbody>
</table>
Year 2  | **Fall (18 units)** | **Winter (20 units)** | **Spring (16 units)** |
--- | --- | --- | --- |
     | MATH 20D (4) | MATH 18 (4) | MATH 20E (4) |
     | PHYS 2C (4) | BENG 140A (4) | MAE 3 (4) |
     | PHYS 2CL (2) | MAE 140 (4) | BENG 100 (4) |
     | CHEM 7L (4) | MAE 8 (4) | BENG 140B (4) |
     | GE Alternative/DEI (4) | Engagement 3 (4) | |

Year 3  | **Fall (16 units)** | **Winter (16 units)** | **Spring (13 units)** |
--- | --- | --- | --- |
     | MAE 107 (4) | BENG 112A (4) | BENG 187A (1) |
     | BENG 110 (4) | BENG 130 (4) | BENG 103B (4) |
     | MAE 170 (4) | BENG 186B (4) | BENG 112B (4) |
     | GE Alternative (4) | GE Alternative (4) | BENG 172 (4) |

Year 4  | **Fall (16 units)** | **Winter (12 units)** | **Spring (13 units)** |
--- | --- | --- | --- |
     | BENG 187B (1) | BENG 187C (1) | BENG 187D (1) |
     | BENG 122A (4) | BENG DE (3) | BENG 125 (4) |
     | MAE 150 (4) | Tech Elective (4) | Tech Elective (4) |
     | BENG DE (3) | Engagement 120 (4) | BENG 186 A (4) |
     | GE Alternative (4) | | |

Due to greater required lower- and upper-division units, this is a more challenging plan to finish in four years. There are four quarters with more than 16 units (18, 18, 18, and 20). However, if we compare this with other colleges, we find that the same major is, overall, similarly challenging:

<table>
<thead>
<tr>
<th>College</th>
<th>Total Units</th>
<th>Quarters with &gt; 16 Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revelle</td>
<td>208</td>
<td>9 (20, 20, 18, 20, 20, 17, 17, 18, 17)</td>
</tr>
<tr>
<td>Muir</td>
<td>196</td>
<td>4 (18, 18, 18, 17)</td>
</tr>
<tr>
<td>Marshall</td>
<td>196</td>
<td>4 (20, 20, 18, 17)</td>
</tr>
<tr>
<td>Warren</td>
<td>192</td>
<td>3 (20, 17, 17)</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>208</td>
<td>6 (20, 20, 18, 20, 20, 17)</td>
</tr>
<tr>
<td>Sixth</td>
<td>196</td>
<td>3 (20, 20, 17)</td>
</tr>
<tr>
<td>Seventh</td>
<td>188</td>
<td>4 (18, 18, 20, 17)</td>
</tr>
<tr>
<td>Eighth</td>
<td>192</td>
<td>4 (18, 18, 18, 20)</td>
</tr>
</tbody>
</table>
To: John Moore, Dean Undergraduate Education
From: Cristina Della Coletta
RE: 8th College Academic Plan

April 22, 2022

Dear Dean Moore:

I am pleased to write this letter in support of the academic plan for 8th College.

The plan revolves around a timely intellectual theme -- “Engagement & Community” -- that shapes the general education and co-curricular programs in the college, in line with UC San Diego’s undergraduate college system. I agree that this theme is intellectually rigorous, focused, applicable to multiple disciplines, and foundational to an anti-racist curriculum.

The proposed general education framework, following the model of 7th College, brings together required courses and alternatives. Chairs in the School of Arts & Humanities agree that “alternative” courses, while remaining thematically focused, offer a broad range of options from different disciplines, thus providing students with a well-rounded education. Departments appreciate the opportunity to create courses that will fit the “Engagement & Community” theme according to specific disciplinary perspectives.

The College-based “Engagement courses” are especially important at this time, and respond to the need to provide our students with a sense of both collective experience and individual engagement, in line with a concrete commitment to equity, diversity, and inclusion. The community-based capstone project aligns well with the belief of “learning by doing” that defines the School of Arts & Humanities and our campus as a whole.

The academic plan is intellectually sound, clearly articulated, and pedagogically innovative. In its interdisciplinary breadth, the plan has the potential to engage with many disciplines on campus, is well aligned with the research strengths described in our university’s strategic plan, and will create significant opportunities for collaboration with community partners on a variety of shared goals.

I am very pleased to offer my full support of this plan.

With best regards

Cristina Della Coletta
Dean, Arts & Humanities
Chancellor’s Associates Professor of Italian Studies
I am writing to enthusiastically support the establishment of Eighth College.

Eighth College’s academic theme of “Engagement and Community” is an important addition to the already impressive slate of General Education courses offered by the colleges. Especially exciting is that the designers of the General Education program have positioned antiracism as the foundation of the college’s curriculum. That the program will combine traditional academic and experiential classes expands the possibilities for students to study structural racism, to view how it plays out and has played out, historically, both in academia and in the world beyond, and to explore avenues for addressing and dismantling it. If the “Engagement and Community” curriculum reaches its potential, it can also enrich communities beyond the university as these communities will benefit both from their partnerships with the university and from the presence and service of UC San Diego students. Via this curriculum, the goals of preparing educated and engaged citizens, strengthening democratic values and civic responsibility, addressing critical societal issues, and contributing to the public good might be achieved.

As a writing program director, I am especially excited by the opportunities for writing and writing instruction afforded by this new theme. Writing is an important mode of inquiry, allowing students to focus on solving challenging problems. It is my hope that writing will be an important part of Eighth College’s General Education courses from start to finish, so that students can practice writing as inquiry, problem-solving, and communication throughout their time at UC San Diego and not only in their first year. The possibility for collaborative writing will further provide students the sense of a shared experience, thereby enhancing their sense of community and empowering them to make changes in their worlds.

Finally, I’m pleased to note the curricular emphasis on reflection, as well as the acknowledgement that writing has a powerful role in the reflection process. In sum, I am impressed that Eighth College writing courses will be committed to reflecting on, exploring, and suggesting solutions to structural racism and inequality in local communities. I am excited to watching this college and its curricula evolve.

Best,

Karen Gocsik
6 May, 2022

Dear Undergraduate Council,

As Chair of Anthropology, I enthusiastically support the development of the 8th College at UCSD. We welcome the opportunity for our department to work with the College and its proposed academic theme of ‘Engagement & Community’. Anthropology is especially enthusiastic about 8th College’s thematic focus on an explicitly anti-racist multidisciplinary curriculum that emphasizes critical community service learning, and we look forward to active participation, through listing of our courses on the 8th College “breadth” GE list, and faculty participation in the college-based courses.

8th College’s alignment with UC San Diego ‘s strategic theme of ‘Enriching Human Life and Society’ makes it especially valuable. Such a focus gives students, regardless of their academic specialty, important tools to understand the importance of community, wellness, anti-racism and social justice. Equally valuable is the main theme’s overlap with “Understanding and Protecting the Planet” and “Understanding Cultures and Addressing Disparities in Society.” Our students must negotiate a mid-21st century in which understanding of anti-racism and social, as well as environmental, justice will be essential for them as professionals and citizens. 8th college’s curriculum can provide students with important tools and the motivation to consciously and proactively, combat racism and turn society away from conflict, violence, economic hardship, and social instability.

The college’s explicitly anti-racist and community-engaged theme fits well with the undergraduate program of UCSD Anthropology. Many of our Anthropology offerings already focus on an anthropological perspective on racisms and social justice. UCSD Anthropology has over a decade of experience in teaching thousands of non-specialized lower division students about anti-racism in our popular “Race and Racisms”, “Debating Multiculturalism” and other lower division DEI courses, while upper division courses more deeply interrogate misconceptions of race worldwide. In a larger sense, all Anthropology is the study of the complex diversity of human communities, with emphases on social systems, including social inequality and social justice. Anthropological Archaeology examines processes of social, political, economic, and technological change over long periods of time. Biological anthropology provides an understanding of how human biological diversity varies and responds to a changing planet and its human community. Sociocultural and medical anthropology examine the impacts of social change on community life, health and wellness across diverse cross-cultural settings worldwide.
We feel that our Anthropology courses and faculty can connect well with 8th college’s goals, and we ask that some of our existing courses (listed below) be considered for inclusion under the 8th college GE “breadth” requirements. Further, we ask that Anthropology faculty expertise might be kept in mind as options are considered for some of the college-based ‘engagement’ courses, including the community-based experiential capstone courses. The college’s pedagogical focus on engaged community-based education fits well with Anthropology’s emphasis on fieldwork research and training. We Anthropologists are, after all, community-based fieldworkers, and a community-based experiential approach resonates for us. We should have something to contribute.

In sum, the 8th College theme would be welcome on campus, and has a rich fit with Anthropology’s existing and future undergraduate curriculum. The academic plan is a rigorous and refreshingly engaged and “hands-on” approach to undergraduate education that will support student’s ability to address the challenges they will face in the future. We look forward to joining 8th College in this exciting project and enthusiastically support the 8th College plan. The College will be a valuable addition to the university and the UC system.

Regards,

Paul S. Goldstein
Professor and Chair
Department of Anthropology

Addendum to Letter of Support:
Relevant courses offered by the Department of Anthropology for breadth GE consideration

ANTH 1. Introduction to Culture
ANTH 2. Human Origins
ANTH 3. Global Archaeology
ANTH 4: Words and Worlds: Introduction to the Anthropology of Language
ANTH 5: Human Machine
ANTH 10: Climate Justice
ANTH 21: Race and Racisms
ANTH 23: Debating Multiculturalism
ANTH 43. Introduction to Biology and Culture of Race
ANTH 101 Foundations of Social Complexity
ANTH 105: Climate Change, Race, and Inequality
ANTH 108: Indigenous Peoples, Extractive Development, and Climate Change
ANTH 109: Climate Change, Cultural Heritage, and Vulnerability

ANAR 117s. Archaeological Field Class (UCSD/La Posta Kumeyaay field school)
ANAR 138. Mesopotamia: The Emergence of Civilization
ANAR 146: Feeding the World
ANAR 166: Environmental Archaeology
ANAR 181 Hunter Gatherers
ANAR 182. Origins of Agriculture and Sedentism
ANAR 183. Chiefdoms, States, and the Emergence of Civilizations
ANAR 184. Empires in Archaeological Perspective

ANBI 111: Human Evolution
ANBI 131: Biology and Culture of Race
ANBI 132. Conservation and the Human Predicament
ANBI 149: Social and Behavioral Epigenetics
ANBI 159: Biological & Cultural Perspective/Intelligence

ANSC 105 Global Health and Inequality
ANSC 122: Language and Society
ANSC 140: Human Rights: Contemporary Issues
ANSC 148: Global Health and Cultural Diversity
ANSC 149: Conflict, Health & Inequality
ANSC 150: Culture and Mental Health
ANSC 151 US Mexico Border Ethnographies
ANSC 155 Humanitarian Aid: What is it good for?
ANSC 158 The Comparative Anthropology of Crisis
ANSC 162: Language, Identity, and Community
ANSC 184. Food, Culture, and Society
ANSC 185: #BlackLivesMatter
ANSC 186: Gender and Incarceration
ANSC 193GS. Human Rights and Environmental Justice

In addition to listed courses, Anthropology faculty may also be interested in teaching in the required college courses or as mentors for community engagement projects.
4/28/2022

Attention Senate Faculty Review Committee:

The Black Diaspora and African American Studies (BDAAS) program enthusiastically endorses the proposed Eighth College Academic Plan. The theme *Engagement & Community* resonates and aligns with the goals of the BDAAS major and African American Studies minor. As the director of BDAAS program, I see multiple confluences between the Eighth College curriculum plan and the BDAAS major plan of study. Namely, both curricula include community-based coursework that will enable UCSD students to deeply engage with different community agencies, schools, health care programs, and other organizations focused on advocacy and support for marginalized groups and struggling populations. We look forward to building strong connections between the BDAAS Program and the Eighth College through multiple iterations of UCSD programming and systems of support.

warm regards,

Thandeka K. Chapman, Ph.D.
Professor, Education Studies Department
Black Diaspora and African American Studies and African American Studies Minor Program Director
University of California San Diego
La Jolla, CA
May 5, 2022

To: Dean John Moore
   Co-Chair, Eighth College Academic Plan Work Group

Re: Eighth College Detailed Academic Plan

Dear Dean Moore,

I write in support of the Eighth College Academic Plan. In my capacity as Faculty Director of the Public Service Minor in Thurgood Marshall College and as co-Director of the Black Studies Project, I am encouraged that the development of Eighth College emphasizes critical community engagement. The development of an anti-racist curriculum that grows from critical attention to social inequity and thoughtfully-supported community-engagement culminating in a community-based capstone project is a welcome infrastructure to our campus’ undergraduate college system.

The proposed academic plan identifies ethical practices, transdisciplinary approaches to knowledge, and reciprocity with attention to local and historicized community conditions as core aspects of engagement. Likewise, the plan functions across the divisions and methods by organizing students to select from curated courses in arts, humanities, social sciences, natural sciences & engineering, and quantitative reasoning. From the perspective of BSP, we anticipate these approaches will align well with the well being, intellectual and community-rooted commitments BSP works to support widely across campus. Likewise, a core commitment for the Public Service Minor in TMC is critical community engagement, and we anticipate synergy between the Eighth College framework and the minor’s mutually shared aims.

Thank you for the opportunity to review the proposed plan. I expect it will be a significant and important addition to undergraduate life and education, and I am hopeful that it will be a crucial site of transformation in locally-informed community relationships in our region.

Best regards,

Angela Booker
Associate Professor, Department of Communication
Faculty Director, Public Service Minor, Thurgood Marshall College
Co-Director, Black Studies Project
To: John Moore, Dean of Undergraduate Education

From: Mandy Bratton, Executive Director, Center for Global Sustainable Development and Founding Director, Changemaker Institute

Subject: Endorsement of Eighth College Academic Plan

May 6, 2022

As the Executive Director of the Jacobs School’s Center for Global Sustainable Development, home to the Global TIES and National Academy of Engineering’s Grand Challenge Scholars programs, and as one of the Founding Directors of the Changemaker Institute, I write to give my wholehearted support for the proposed academic plan for Eighth College.

The academic plan outlines a thoughtful, balanced, and comprehensive approach to general education, emphasizing enlightened community engagement. It aligns well with the mission and values of both the Changemaker Institute and the Center for Global Sustainable Development. Indeed, I hope the ENG 100D and L courses (Design for Development and Design for Development Lab) will be considered as alternative courses within the proposed program. These courses teach students to “co-create” solutions with community partners in ways that promote equity and mutual respect and would be of particular interest to Eighth College students with engineering and technology majors.

In summary, I fully support the academic plan for Eighth College and recommend its approval. I look forward to exploring how both the Center for Global Sustainable Development and the Changemaker Institute can contribute to the development of Eighth College and partner with it in the future.
April 10th, 2022

John Moore
Dean, Division of Undergraduate Education

SUBJECT: Endorsement of Eighth College Academic Plan

I am writing on behalf of the Department of Chemistry and Biochemistry in support of the Eighth College’s Academic Plan. The plan’s research themes, “Enriching Human Life and Society” and “Understanding Cultures and Addressing Disparities in Society” are very important to science departments such as Chemistry and Biochemistry.

The fields of chemistry and biochemistry are focused around enriching human life and society. Through the development of novel therapeutics and understanding the mechanisms of disease as well as finding solutions to energy and climate change, chemists and biochemists are committed to enriching human life and society. In fact, UC San Diego’s Department of Chemistry and Biochemistry has a long standing history of engaging in research to enrich human life and society. We are now seeing this more and more with the students we teach and the interests of our new faculty who are initiating their research laboratories.

The fields of chemistry and biochemistry are just now realizing the importance of the research theme “Understanding Cultures and Addressing Disparities in Society”. The low numbers of students of color in STEM fields in general are not where we want our fields to be. Our new faculty, hired in the past 5 years, understand that there are disparities that need to be recognized and addressed. Thus, the focus on these issues by Eighth College aligns well with what many faculty are concerned about and what they would like to contribute to changing STEM fields to be a more inclusive.

I really appreciated the well-written, well-considered curriculum put forward for this new college. I particularly like the way interdisciplinary approaches are weaved throughout the curriculum. Although I think there are ongoing partnerships with the community already, it is clear that the Eighth College academic plan takes it to another level.

Overall, the Department of Chemistry and Biochemistry is happy to endorse this Eighth College Academic Plan.

Sincerely yours,

Vicki Grassian
Distinguished Professor and Chair
TO: John Moore, Dean of Undergraduate Education

SUBJECT: Eighth College Academic Plan

Dear Dean Moore,

The Chicanx and Latinx Studies (CLS) Program enthusiastically endorses the proposed Eighth College Academic Plan. The rationale and goals for the plan strongly align with the goals of CLS which is dedicated to engaging with diversity and social justice throughout our curriculum and programs.

CLS firmly believes the proposed Eighth College Academic Plan will create important opportunities for necessary dialogue about antiracist pedagogy and teaching for social justice on our campus and in the greater San Diego community.

The theme of “Engagement & Community” resonates particularly strong with CLS’s own commitment to creating intellectual spaces and systems of support for the academic exploration of diverse groups of peoples, perspectives, and human experiences, through engaging community voices. Plus, ‘engagement’ at its core ensures that students will develop an understanding of their own identities vis-à-vis broader communities through the experiential goals of the engagement series.

CLS is eager to collaborate with Eighth College and fully supports the Eighth College Academic Plan.

Sincerely,

Robert Castro
Professor of Theatre & Dance
Director, Chicanx and Latinx Studies
UC San Diego
Dear Dean Moore,

The Cognitive Science Department is enthused to support the creation of an 8th college at UCSD. The new 8th college will serve to alleviate the over-population of existing colleges. Furthermore, the theme of the college surrounding community engagement is well-conceived and stands to more directly focus student efforts related to outreach and understanding of real-world problems and their solutions.

Sincerely,

Douglas A Nitz, PhD
Professor and Chair, Department of Cognitive Science
University of California, San Diego

Tel. 858-213-5815
To:                  John Moore, Dean of Undergraduate Education
From:  Brian Goldfarb, Associate Prof. and Chair  
Department of Communication
Subject:  Endorsement of Eighth College Academic Plan

April 19, 2022

I am writing on behalf of the Department of Communication to express enthusiastic support for the Eighth College Academic Plan. As a department with a long and rich history of teaching and research centered on community-based/engaged learning and participatory action research, and social justice, we are excited at the prospect of the University launching a college whose mission resonates with our core departmental values. The plan’s research themes, “Enriching Human Life and Society” and “Understanding Cultures and Addressing Disparities in Society” are also resonant with the pedagogical ideals of our department. We view this as an opportunity for a variety of fruitful collaborations.

We appreciate the academic plan’s thorough approach and well-considered balance between the needs of student populations of importance to the University and the capacities of collaborating departments/units. The college’s academic plan is unique in bringing together the very best that UCSD has to offer educationally while looking to expand and improve our partnerships with the surrounding community.

The proposal lays out an ambitious and well thought out plan for a college with diverse and challenging functions related to “Engagement & Community” that is strongly aligned with UC San Diego Strategic Plan’s goals of “Community Enrichment” and “Diversity and Access”,

In summary, I confirm support of this plan and look forward to the opportunities for our faculty to contribute to the development and launch of eight college.

Sincerely,

Brian Goldfarb, Assoc. Professor and Chair, Department of Communication
Dear Dean John Moore

The Council of Provosts congratulates you for bringing Eighth College to fruition and eagerly anticipates the opening of UC San Diego’s newest undergraduate college. The Provosts enthusiastically support the establishment of the new college and thank the faculty who helped draw up the proposal.

UC San Diego has responded to the rapid increase in undergraduate enrollments over the past several years in a manner that strengthens a unique college system, one that prides itself in providing a variegated and academically rigorous student experience. The theme of Eighth College, “community engagement”, is important and prescient, addressing as it does the escalating concerns about frayed social bonds, disrupted networks, the dilution of communal cohesion and the rise of global racism in the contemporary era. The advent of Eighth College also rejuvenates the original goal of limiting the number of students in each college to approximately 4,000, as opposed to the 5,200 students who strain the resources of the prevailing colleges. The resultant “decompression” also benefits college staff, who play central roles in the residential, academic, accommodation and recreational experience of the University’s 34,000 undergraduate students. The coming of Eighth College therefore upholds the campus commitment to a vibrant student-centered undergraduate experience, a hallmark of the University since its inception.

The Council of Provosts is pleased to note that the campus’ overarching commitment to being “a student-centered, research-focused, service-oriented public university” resonates in the innovative curriculum of Eighth College. Combining a number of “alternative” and “engagement” courses, the curriculum encourages a broad and flexible interdisciplinary approach that includes a required community-based research project. “Alternative” courses enable students to draw from the full range of departmental courses, ensuring that students in different majors may curate courses that personalize their academic goals. “Engagement” courses encourage students to focus interdisciplinary insights and research methods on issues that are relevant to broadly defined constituencies, with an emphasis on local communities. “Engagement” courses emphasize themes concerning community, wellness, anti-racism, and social justice and so anchor the thematic focus of Eighth College. In sum, this innovative interdisciplinary blend of self-curated academic courses, community-focused courses, and a required community-based research project that each student has to complete successfully introduces a new student experience on a campus that is already distinguished by a variegated collection of undergraduate communities. The very nature of the academic plan ensures that there is ample room for continual modification in the years to come. This ensures that the changing outlooks and experiences of future student cohorts will continually refresh Eighth College in the years to come.

The Council of Provosts looks forward to the inauguration of Eighth College and stands ready to provide any assistance to ensure the success of the College.
Date: April 28, 2022

To: John Moore
   Dean of Undergraduate Education

Fr: Sorin Lerner
   Professor and Chair, Department of Computer Science & Engineering

Subject: Eight College Academic Plan- Request for Endorsement

Dear Dean Moore,

The CSE department supports the Eighth College Academic Plan. The plan seems well thought out and emphasizes many important themes. We look forward to partnering in the implementation of this plan.

Sincerely,

Sorin Lerner
CSE Chair and Professor
April 16, 2022

To: UC Board of Regents and UCSD’s Divisional Senate

Re: Support for Eight College’s academic plan

As Chair of the Department of Economics, I am writing in support of Eighth College’s proposed theme and academic plan. The theme of “Engagement and Community” is timely and important. The design of the general education curriculum is thoughtful and incorporates current best practices. It pays attention to making sure both the alternative course offerings and engagement course series are cohesive, and that the capstone experiential community service learning project is productive to both the student and the community.

Our department is pleased to offer our classes among the curated list of 10 alternative general education courses these students will take. The courses that would be tentatively included on the list from Economics (ECON 1-3, 5, 101, 129-30, 134, 137-8) all have connections to social justice and equity/distribution. Many of these are included in the general education requirements of other colleges, such as Revelle, Muir, Warren, Roosevelt, Sixth, and Seventh. We do not expect there to be a large impact on our enrollments or class sizes, particularly given the intention to decompress enrollments in the other colleges.

I fully endorse the academic plan and encourage that it be approved.

Sincerely,

Julie Cullen
Chair, Department of Economics
April 25, 2022

Re: Letter of Support for Eighth College Academic Plan

The Education Studies Department (EDS) is supportive and excited about the establishment of Eighth College and their overarching theme of Engagement & Community. EDS has been engaged with our community partners for over 50 years, beginning in 1972 with the establishment of the Teacher Education Program and community engagement courses with Thurgood Marshall College. Since those humble beginnings, we have established vibrant relationships with many of the other colleges, including Warren College, Elenore Roosevelt College, and Sixth College. The colleges have included EDS courses as part of their writing component, community engagement experiences, and practicum course requirements. Sixth College enjoys a strong connection with our Partners at Learning (PAL) program that provide community engagement experiences for over 700 undergraduates per year offered through ten (10) different courses. All PAL courses include a 40-hour practicum with local schools and community partner locations.

It is our goal and hope to offer Eighth College a strong collaboration around planned engagement courses. In our 50 years of community partnership we have established many connections across San Diego County and learned some key aspects of this work, such as:

- Community engagement takes time, care, and consistency to build relationships that are authentically community engaged. There is plenty of injustice in the world to go around, but maintaining community relationships, especially with local nonprofits, is extremely arduous, careful work.
- Community engagement programs/courses require a LOT of faculty work and care. Establishing and maintaining the relationships is crucial. Faculty workload must be carefully planning to prevent burn-out and to support our faculty.
- Professional development for new professors engaging with the college is important. It would be very difficult to build this type of program without the input of those across the campus who are established in this work.
- Equity and social justice work takes time to learn and even more time to establish as a way of interweaving these ideas through your teaching. Wellbeing pedagogy also does not come inherently to all.
- Community partner input (local nonprofits, schools, etc.) is vital to begin this work. Their voices being clearly articulated in this stage of planning will support the overall success of the program.
- Community engagement takes time and care. Quite simply, if you haven't done service-learning before, even if you have some training in higher ed community-engagement, there is always a risk that a university large-scale presence can do more harm than good within communities.
• The College should take a look across the campus to partner with established, existing, successful programs as they begin this work.

EDS can serve the college as a strong Equity, Diversity, and Inclusion (DEI) partner. We currently offer sixteen (16) approved DEI courses. Many of these courses include a practicum component that has students working in the community.

- EDS 25 American Higher Education and the Collegiate Experience
- EDS 112 Urban Education in the United States
- EDS 113 Chicanas/os & Latinos in Education: Policy, Practice & Challenges to Equity
- EDS 116 Equity Minded Education
- EDS 117/ SOCI 117 Language, Culture, and Education
- EDS 117 GS Language, Culture & Education
- EDS 125 History, Politics and Theory of Bilingual Education
- EDS 126/ SOCI 126 Social Organization of Education
- EDS 130/139 Introduction to Academic Mentoring of Elementary School Students
- EDS 131/139 Early Childhood Development and Education
- EDS 133 Counseling, Mentoring and Academic Advising (Preschool through 12th Grade)
- EDS 135 Working with Newcomer Communities in San Diego
- EDS 136/139 Introduction to Academic Tutoring of Secondary School Students
- EDS 137/139 Introduction to Discipline Specific Teaching and Learning
- EDS 145 Integrating the Arts Across Curriculum
- EDS 146 Mindfulness and Education

Other EDS courses provide students with community engagement practicum experiences focused on research experiences for our undergraduate students and valuable data to our community partners. EDS140 (Introduction to Action Research in P–12 Schools) uses a service-learning model, providing students with the opportunity to serve as mentors and tutors at local underserved P–12 public schools and/or community centers while building the foundations of their own action research projects. Students continue to integrate their service-learning experiences at local P–12 public schools and/or community centers with action-oriented research experiences through EDS141 (Action Research in P–12 Education: Advanced Practicum in P–12 Schools and Communities). They are given opportunities to expand their understanding of qualitative and quantitative research methods in education and emphasizes the importance of carrying out research in responsible and ethical ways.

The Education Studies Department (EDS) looks forward to working with Eighth College on this much needed academic pathway as we welcome the Eighth College students into EDS courses.

Christopher P. Halter, Ed.D
Teaching Professor (Senior LSOE)
Science & Mathematics Initiative / California Teach
Secondary Mathematics & Technology Education
Chair, Education Studies Department (EDS)
858-534-8186
Dear John,

The Environmental Systems Program is very pleased to endorse the proposed academic plan for Eighth College. We have reviewed the plan and we enthusiastically support the articulation of the academic theme of “Community and Engagement” and we are impressed with the level of consideration and detail that has been put into designing college general education requirements around this theme. This proposed college theme, and the careful construction of this theme in an anti-racist curriculum, builds on and amplifies the campus’ commitment to these principles and values.

We note that the proposed requirement for a community engagement project for ALL students in eighth college is a very bold move. The Environmental Systems major has a senior project requirement for all majors, and many students satisfy this requirement with community-based internships. Thus, we can attest to the high impact of this type of academic work - and we recognize the effort required to develop and maintain equitable community partnerships. This proposed academic plan contains enough thought and detail on the logistics of executing this proposed requirement. However, more details of this particular requirement in the evaluation plan, including metrics of how success will be determined and what might be considered if the changes are needed, seem prudent.

In summary, we are pleased to endorse this proposal and we look forward to interesting collaborative work that can further promote the value of community-based and project-based work and develop campus wide synergies to support student projects in these areas.

Sincerely,

Jane Teranes, Ph.D.
Senior Teaching Professor, Scripps Institution of Oceanography
Faculty Director, Environmental Systems Program
To: John Moore, Dean Undergraduate Education

From: Andrew Jolivette, Professor and Chair Department of Ethnic Studies

Subject: Endorsement of Eighth College Academic Plan

April 22, 2022

I am writing on behalf of the Department of Ethnic Studies to express enthusiastic support for the Eighth College Academic Plan. As a department with a long and rich history of teaching and research centered on community-based/engaged learning and participatory action research, and social justice within and across the field of Ethnic Studies, we are excited at the prospect of the University launching a college whose mission resonates with our core departmental values. The plan’s research themes, “Enriching Human Life and Society” and “Understanding Cultures and Addressing Disparities in Society” are also resonant with the pedagogical ideals of our department. We view this as an opportunity for a variety of important collaborations.

We appreciate the academic plan’s thorough approach and well-considered balance between the needs of student populations of importance to the University and the capacities of collaborating departments/units. The college’s academic plan is unique in bringing together the very best that UCSD has to offer educationally while looking to expand and improve our partnerships with the surrounding community.

The proposal lays out an ambitious and well thought out plan for a college with diverse and challenging functions related to “Engagement & Community” that is strongly aligned with UC San Diego Strategic Plan’s goals of “Community Enrichment” and “Diversity and Access”,

In summary, I confirm support of this plan and look forward to the opportunities for our faculty to contribute to the development and launch of eight college.

Sincerely,

Andrew J. Jolivette, Ph.D.
Professor and Department Chair, Ethnic Studies
April 25, 2022

Dear Dean Moore,

I am writing in strong support of the proposed Eight College Academic Plan in my dual capacities as Professor of Anthropology and Director of the Global Health Program (GHP). The College’s academic theme of ‘Engagement & Community’ is particularly concordant with the GHP’s student-centered mission that places a priority on improving health and achieving equity in health for all people worldwide. Our emphasis on transnational health issues, determinants, and solutions promotes interdisciplinary collaboration in a way that highlights a balance between critical thinking and real world experience, and from this standpoint we fully endorse this academic plan that emphasizes critical community service learning and forms the basis of an anti-racist curriculum.

Sincerely,

Thomas J. Csordas, Ph.D.
Distinguished Professor, Department of Anthropology
Dr. James Y. Chan Presidential Chair in Global Health
Director, Global Health Program and UCSD Global Health Institute
April 25, 2022

Dear Dean Moore,

I have reviewed the proposal for Eight College and wholeheartedly endorse the proposed plan. The academic theme of "Engagement and Community" is particularly relevant to HDSI mission and goals. Kindly allow me explain: as a campus hub for data science, the mission of HDSI translates into academic courses and programs that not only add to the knowledge and skills in various areas of data science spanning disciplines of computer science, mathematics, sciences, humanities and social sciences, but also an awareness component to their understanding of the topical areas. This awareness often spans topical areas of responsibility, trust and ethics, for instance. The central question in such awareness arousal is to impart an understanding among our students about the limitations of methods and tools they are learning, limitations that are not only mathematical or technological but also sociological. With that core orientation, we believe we can contribute to the success of the Eighth College especially through our courses (such as DSC 10 and capstones) that add to the area of Quantitative Reasoning outlined in the proposal.

In summary, we are support the proposal enthusiastically and look forward to working with the team in making college experience wholesome and exciting for our students,

Sincerely

Rajesh Gupta

Rajesh Gupta, PhD
Director, Halıcıoğlu Data Science Institute
May 3, 2022

Dear Dean Moore,

The History department supports the creation of the Eighth College academic plan. We see no negative impacts for the Department of History and look forward to working with you as you develop this important new addition to the campus curriculum.

Sincerely yours,

Edward Watts
Chair, Department of History
Alkiviadis Vassiliadis Chair and Professor of History
The Human Developmental Sciences Program enthusiastically supports the establishment of Eighth College. It is an important component in accommodating undergraduate growth as it reaches its final state of approximately 32,000 students. As a Program dedicated to community outreach integrated in an obligatory field component for our majors, we are pleased to see that the theme of the College will be Engagement and Community.

Sincerely,
Farrell Ackerman
Director of the Human Developmental Sciences Program/Professor, Dept. of Linguistics
23 April 2022

John Moore
Dean, Undergraduate Education

RE: Letter of Support for Eighth College

Dear Dean Moore:

I am pleased to provide this letter of support for the proposal for Eighth College here at UC San Diego. I fully agree that Eighth College represents an important step in establishing the physical and academic infrastructure necessary to create a student-centered campus in the wake of increased enrollments. It is of particular importance that enrollments in the Colleges decompress to approximately 4,000 each, and thus, Eighth College allows the campus to maintain its goal of 32,000 undergraduates in its 2035 Long Range Plan.

I am fully supportive of the proposed academic theme of “Engagement & Community” for Eighth College, and note that this theme has relevance to Engineering, including energy and environment, as well as changing technologies and their interplay with communities. These fit the directions and goals of Engineering.

I look forward to the opening of Eighth College and the admission of its first students in Fall 2023.

Sincerely,

Albert ("Al") P. Pisano
Member, US National Academy of Engineering
Member, US National Academy of Inventors
Walter J. Zable Distinguished Professor & Dean
Irwin and Joan Jacobs School of Engineering
University of California San Diego
Hello Dean Moore
I fully read the plan, and I support it. Really excited about its theme of Engagement and Community, and the direction toward minorities support and education.

Kyong Park
Professor: Public Culture/Speculative Design/Transnational Korean Studies.
University of California San Diego, Department of Visual Arts,
Dear Professor Moore:

I have read the proposal for the Eighth College Academic Plan and strongly endorse it. The proposed theme of *Engagement and Community* takes seriously the pedagogy of critical community engagement, combining a broad liberal-arts based foundation for incoming undergraduate students with a rigorous writing component and actual experience working with communities adversely affected by structural racism and systemic economic inequality. The idea of diverging from other college writing programs through the introduction of the rigorous research and writing requirement in the second year seems a welcome idea, as many incoming students experience confusion and burnout with the college writing programs in their first year. Giving students an opportunity to gain confidence and enthusiasm around a field of study in which they actively participate will certainly influence the quality of student writing, as it will boost student morale in the college writing programs.

Please don’t hesitate to call (619-519-4113) or email me (jdblanco@ucsd.edu) if there is anything else I can do in relation to my evaluation of the Eighth College Proposed Academic Plan.

All best,

Jody Blanco
Department of Literature
Director, Latin American Studies Program
UC San Diego
I would like to express my enthusiastic support for the proposal for the creation of Eighth College. The proposal emphasizes the theme of Engagement and Community with the subtheme of addressing structural racism and antiBlackness. I think these are themes whose time has come. Let me describe some of the elements of infrastructure I helped to create at UCSD that are especially relevant to the themes of Eighth College.

Back in 1995, I was one of the founders of the UCSD Cross Cultural Center. This center is the most used space on campus with over 400 events per quarter discussing issues around racism.

As Acting provost of Sixth College, I co led a conference on the importance of experiential learning and civic engagement. The conference focused on the many internship opportunities that are available for a UCSD student.

As Acting Provost of Muir College, I co led a conference on Teaching Diversity. The conference focused on the following questions posed by the American Association of Colleges and Universities (AACU): How do we teach students to consider the implications of the individual’s and others’ identities and membership in multiple groups bounded by race, ethnicity, gender, religion, class, sexual orientation, ability and national origin? How do we teach students to engage reflectively with the difficult questions of diversity in American democracy such as power, privilege and discrimination in their historical, current, global and socio-economic contexts?

Both these conferences have definite implications for the themes of Eighth College. They were attended by students and educators from the whole California community including neighboring universities, community colleges, high schools and middle schools. Volumes were produced that chronicle the many insights around experiential learning and teaching diversity. Since these conferences had packed audiences and multiple panels, they demonstrate the need for students to be educated in these very important topics. There is extensive data showing that a student who has had an internship experience in an area of social justice is well equipped to enter our workforce. The Eighth College proposal addresses exactly these issues.

UCSD is also equipped to address structural racism. Since the murder of George Floyd, UCSD participated in a 21 Day Challenge on Racism where students, staff and faculty discussed issues of racism against African Americans, Indigenous peoples, Chicanos and Asians. UCSD also has an Ethnic Studies Department, the second ethnic studies department in the country that grants a PhD.

Just weeks ago, over 140 students, staff and faculty participated in a campuswide zoom conference on Enhancing the Black Student Experience. Bekki Pettit, our Vice Chancellor for Equity, Diversity and Inclusion has helped to create and support the Cross Cultural Center, the Women’s Center, the LGBTQ Center, the Raza Center, the Black Student Union, the Intertribal Council Center and the Veteran’s Center. I can’t think of any other university that has built such an elaborate infrastructure to address
structural racism. These centers will provide opportunities for students to become interns and be mentored by the center directors. The Cross Cultural Center has had a mentorship program for over 20 years and many of those mentors are now alumni who are willing to accept interns in many social justice offices around the country.

These are just a few of the ways UCSD is uniquely positioned to create Eighth College. By drawing on these elements, the Provost of Eighth College will be able to create a curriculum and find instructors to create a profound college experience for its students.

Feel free to contact me if you have any further questions.

Sincerely, James Lin, UCSD Professor Emeritus
April 26, 2022

TO: John Moore, Dean of Undergraduate Education

FROM: Eric Baković, Chair, Linguistics

RE: Endorsement of Eighth College Academic Plan

On behalf of the Linguistics Department, I write with enthusiastic support for the Eighth College Academic Plan. We are very pleased to see the launch of a college with the engagement and community themes discussed in the plan, themes that resonate with our own departmental values. The academic plan for the college brings together the very best that UC San Diego has to offer while also looking to expand and improve upon our partnerships with the surrounding community. The plan’s goals are strongly aligned with the UC San Diego Strategic Plan goals of *Community Enrichment* and *Diversity and Access*. I look forward to the opportunities for our faculty to contribute to the development, launch, and ultimate success of Eighth College.
April 26, 2022

John Moore  
Dean of Undergraduate Education

Dear Dean Moore,

I write in support of the Eighth College Academic Plan. As a department with a global, transnational, and interdisciplinary approach to the study of literature and culture, UCSD’s Department of Literature has always attracted students who are interested in ways that an education based in arts and humanities can be applied to real world contexts. A program like Eighth College’s “Engagement and Community” would be of high interest to our undergraduates, and have a real place in the context of UCSD’s other colleges.

The broad level of cross-disciplinary interest in the theme would draw students with various interests in further study in humanities, fine arts, social science, and science/technology interests, and that’s precisely why it is perfect for UCSD, an institution in and of itself that draws a broad and dynamic blend of students.

As the Eighth College proposal points out, recent events such as the global pandemic and the increased attention to racial injustice brought about by the murders of George Floyd and Ahmaud Arbery, have intensely sharpened the desire of faculty in our department, and at UCSD generally, to integrate community engagement and service learning into our teaching. Eighth College, with its current academic plan, can be an essential foundation in achieving that broader systemic vision.

Yours,

Kazim Ali  
Professor and Chair  
Department of Literature
Dear Dean Moore,

this letter is to confirm the support of the mathematics department for the proposed academic plan for the nascent Eighth Undergraduate College.

The mathematics department offers many courses that can bolster analytical skills and develop facility with the theoretical understanding of how to manipulate data. The department eagerly looks forward to the formation of the new college and the opportunities to educate its students.

Yours sincerely,

[Signature]

James Mckernan, FRS
Department Chair
Charles Lee Powell Endowed Chair in Mathematics
Eighth College Academic Plan

I am very happy to write in support of the proposed Academic Plan for UCSD’s Eighth College. The proposed plan is well thought out and builds on many of the same organizational concepts as the recent Seventh College curriculum. The thematic organization around community engagement is timely and well address student desires and also help build stronger connections as the campus orients itself in a more outward looking manner. Our department is happy to have proposed a number of courses toward satisfying the Alternatives requirement, especially classes dealing with Black music and musical cultures that might align with the anti-racist orientation of the overall theme. The Academic Plan looks excellent as proposed and we are excited to be part of it.

Yours Sincerely

Anthony Burr
Professor of Music,
Department Chair
April 25, 2022

TO: Dr. John Moore, Dean of Undergraduate Education

RE: Endorsement for the 8th College

Dear John,

We endorse the Eighth College academic plan. The proposed theme and general education curriculum for Eighth College are well developed.

Sincerely,

Shaochen Chen, PhD
Chair of NanoEngineering Department
April 25, 2022

Dear Dean Moore,

I am writing in strong support of the creation of Eighth College and the proposed theme of Engagement and Community. I very much look forward to our department having the opportunity to work with the college.

Sincerely,

Dana Kay Nelkin
Professor and Chair of Philosophy
April 25, 2022

Dear Colleagues,

On behalf of the School of Physical Sciences, I lend my strongest endorsement to the proposal to create Eighth College at UC San Diego. Eighth College would provide two critical opportunities to our campus. First is the opportunity to return each of our colleges to an enrollment of 4,000 undergraduate students. By decreasing the current college enrollments from their impacted state, we as a campus can better focus on our overall goal to keep UC San Diego student-centered. Second, the opportunities created by the proposed theme and academic plan of Engagement & Community. This is a welcomed compliment to the themes of the other colleges, touching on timely social and political issues, and providing the experience for students to turn their community interests into actual community projects. I anticipate that Eighth College will quickly have a big impact on students and develop a strong legacy of community leaders among our alumni. This would be a proud addition to the impact and legacy of the University of California overall.

Sincerely,

Steven E. Boggs, Dean
School of Physical Sciences
Date: April 22, 2022

To: John Moore
Dean, Undergraduate Education

Re: Voting Procedures, Department of Physics

Thank you for sharing the document with the description of the new Eighth College Academic Plan and Curricular Requirements proposal. On behalf of the Department of Physics, I am pleased to offer our full support for the proposal. We feel the theme of *Engagement & Community*, as described in the proposal, is well suited for a new college. This will complement the themes of the other seven colleges. Although there is the potential for additional enrollments in some of our courses listed as Alternative Course choices, we feel our curriculum will be able to handle the additional students.

We are certain that future students will benefit from the establishment of this new college. We look forward to working with the administration in implementing the academic program.

Sincerely,

M. Brian Maple
Chair, Department of Physics
April 25, 2022

Dear Members, Divisional Senate,

I’m writing to voice the Department of Political Science’s strong endorsement of the Eighth College Academic Plan. Both the intellectual approach of this plan – with its clear focus on learning through critical community engagement – and the substantive focus that the plan places on understanding and addressing structural racism could not be more timely and vital for our university.

Community engagement fits with the work that so many of our department’s faculty do with local organizations, whether those are groups that advance voter engagement, support asylum seekers or other immigrants, or collaborate with UC San Diego through “community stations.” With so many other departments housing faculty who focus on local, state, and global engagement, we are confident that students will find many opportunities to advance their understanding of all of these communities through an engaged approach. We are also excited to see a curriculum built through “alternatives” that allow students to select broadly from diverse disciplines within unifying themes, including quantitative reasoning. The Department of Political Science is gratified that eleven of our courses are included in the list of permitted “alternatives.”

Our department also welcomes the timely focus on understanding and addressing structural racism. With courses ranging from “Race and Ethnicity in American Politics” to “Participation and Inequality” to “Race and Law” to “Comparative Politics of Race and Ethnicity” to “Voting Rights Act: 50 years later” as part of this curriculum, we hope to contribute to Eighth College students understanding of these topic and their ability to impact our world through this understanding throughout their careers.

If I can provide any additional information about our department’s support for this promising plan, please don’t hesitate to contact me.

Best regards,

Thad Kousser
Professor and Department Chair
Department of Political Science
UC San Diego
John Moore, Dean of Undergraduate Education  
University of California, San Diego

April 25, 2022

Dear Dean Moore,

As Chair of UC San Diego’s Department of Psychology, I am very happy to endorse the proposed plan for Eighth College. As you are well aware, the launch of the new college is critical to the health of the entire undergraduate enterprise, as it will relieve the pressures of our recently ballooning enrollments on current programs.

The proposed college theme – Engagement & Community – is timely and I expect very durable. It is well designed to serve as a useful scaffold in support of a diversity of campus priorities and initiatives. I appreciate the care and thought that has gone into a general education curriculum based on course alternatives, and which appears well designed with respect both to 4-year and transfer students. I believe it will have a very positive impact on students as they prepare for leadership roles in an increasingly interdependent world facing daunting environmental, technological, cultural, political, economic and psychological challenges. The Department of Psychology looks forward to contributing to this exciting educational project.

Sincerely

Michael Gorman, PhD
Professor and Chair
Department of Psychology
UC San Diego
April 20, 2022

John Moore, PhD  
Dean, Undergraduate Education  
University of California San Diego  
9500 Gilman Drive  
La Jolla, CA 92093-0108  
E: moorej@ucsd.edu

RE: Letter of support for the Academic Plan for the Eighth College

Dear Dr. Moore,

On behalf of the Bachelor of Science in Public Health Program (BSPH) and the Herbert Wertheim School of Public Health and Human Longevity, we are pleased to provide this letter in great support of the academic plan and proposed academic theme for the Eighth College, with a start date of Fall 2023. The BSPH Program is dedicated to improving human health through the development and application of scientific knowledge in the context of human rights and cultural understanding. We are currently facing global challenges that continue to exacerbate health disparities, and we recognize community engagement as a critical strategy to promote the overall health and well-being of our communities. Thus, we have reviewed, and we enthusiastically welcome the Eighth College’s proposed Academic Theme, “Engagement & Community,” which will equip students with the necessary education and skills to effect change in their communities.

Furthermore, the proposed theme, “Engagement & Community” strongly aligns with our program’s public health principles and practice, rooted in protecting the public from potential harm and promoting health equity. We actively seek to study human health through multiple frameworks and contexts, and the Eighth College captures this goal by employing an interdisciplinary curriculum. Likewise, we look forward to working with the curriculum committee for the Eighth College, to include Public Health courses as options available to students. We are confident that the proposed academic plan will enrich the University’s mission and equip future leaders to promote public good in equitable manner that respects community values and needs.

Sincerely,

Cheryl Anderson, PhD, MPH, MS  
Dean of the Herbert Wertheim School of Public Health  
and Human Longevity Science  
University of California, San Diego  
9500 Gilman Drive, Mail Code 0628  
La Jolla, CA 92093

Argentina Servin, MD, MPH  
Director, BS in Public Health

Britta Larsen, PhD  
Associate Director, BS in Public Health
April 25, 2022

John C. Moore  
Dean of Undergraduate Education  
University of California, San Diego  
La Jolla, CA 92093

RE: Proposed UC San Diego Eighth College

Dear Dean Moore:

I was very happy to learn that the proposal for an Eighth undergraduate college at UC San Diego was approved by the Divisional Senate last June and the Academic Council just last month. I am writing to express my full support of the establishment of an Eighth College at UC San Diego and stress QI’s interest in being an integral part of the College’s educational curriculum.

The Qualcomm Institute (QI) at UC San Diego encourages transdisciplinary education and research to foster a new generation of scholars who will take an active interest in the world around them. The proposed Eighth College theme of “Engagement & Community” speaks strongly to QI’s mission and a greater than 20-year history of advancing technology to solve global challenges in the areas of equity, health, culture, energy, and the environment. I am particularly interested in the proposed interdisciplinary synthesis courses that will be part of the Eighth College curriculum, which is an area where I think QI could offer students unique and impactful learning experiences. QI faculty and researchers have been engaging students in experiential learning opportunities that often cross boundaries between disciplines since we were founded in 2000. Programs like Engineers for Exploration – which takes undergraduate students to international locations like Guatemala to work on projects that are using technology to tackle issues in ecology, conservation and archaeology – challenge students to apply their knowledge and skills to real-world problems in real-world collaborative environments. As potential synthesis courses for Eighth College, we could dramatically expand these types of learning experiences, which consistently attract students not only to computer science and engineering disciplines, but to UC San Diego in general. Based on preliminary discussions with about half a dozen faculty and researchers, I think QI could undertake to create opportunities for about 200 to 250 students a year, if adequate resources commensurate with campus norms are budgeted.
As the Director of the Qualcomm Institute, I am excited about the future of UC San Diego and the academic plans that have been laid out for Eighth College. You have presented a novel and ambitious approach to general education, and I look forward to the possibility of QI becoming a significant part of the Eighth College experience.

Sincerely,

![Signature]

Ramesh Rao, PhD
Professor, Electrical and Computer Engineering
Director, Qualcomm Institute
Interim Director, California Institute for Telecommunications and Information Technology
Qualcomm Endowed Chair in Telecommunications and Information Technology
April 11, 2022

Dear Dean Moore,

The Rady School of Management is pleased to support the proposal for the Eighth College. My entire team connected to the undergraduate program was thrilled with the community engagement theme. We believe not only will this be positively viewed by future UCSD undergraduate students, but application is also the best method to ensure learning.

Best,

Lisa Ordóñez
Dean
Stanley and Pauline Foster Endowed Chair
Rady School of Management
April 18, 2022

To: Professor John Moore  
   Dean of Undergraduate Education  
   University of California San Diego

From: Sarah Gille, Professor and Chair, SIO Department

RE: Support for Eighth College Academic Plan

I write to offer enthusiastic support from the Department of Scripps Institution of Oceanography for the Academic Plan for UC San Diego's Eighth College. The Eighth College theme of "Engagement & Community" is well aligned with the Scripps commitment to science with societal impacts. Our department has long-standing research and educational interests and significant faculty accomplishments that extend to studying environmental challenges that our community confronts. We also have a strong commitment to undergraduate education through our majors in Geosciences, Oceanic and Atmospheric Sciences, and Marine Biology, as well as the Environmental Systems Program and the interdisciplinary minor in Climate Change Studies. Our curriculum is expanding in the area of environmental justice, and we are pleased to see that Eighth College has identified some of our courses that touch on this area as potential course “alternatives”. Some of our faculty and researchers carry out work that directly addresses environmental challenges in San Diego County or within the State of California and are likely to be particularly well positioned to help guide Eighth College capstone projects that confront community concerns.

We look forward to supporting the objectives of Eighth College and to working with the college as its program develops.
April 25, 2022

TO:               Prof. John Moore, Dean  
                  Undergraduate Education

RE:               Eighth College Academic Plan Endorsement

I have reviewed your proposed academic plan for the Eighth College. I am happy to endorse it as it has many good qualities: it is timely, important, and impactful. The theme of Engagement and Community has the right tone to it. Our students are increasingly looking for opportunities to engage with the community around and beyond UC San Diego. We have many more such opportunities now than we had five years ago, but the demand is high. Almost all our majors have a practice component which encourages students to explore beyond the boundaries of the university. An undergraduate college offering this theme will resonate with students who apply to UC San Diego. They want an undergraduate experience that builds purpose and direction in their lives, and Eighth College is perfectly timed for this.

I suggest that as your planning team begins to fill in details that you invite our departments and programs with strong practice and engagement requirements to devise ways to coordinate effort. There are never enough opportunities for all our students, especially at the enrollment size we are at now. Among the programs we have are Partners in Learning with Education Studies, Urban Studies and Planning’s placemaking courses, Global Health capstone projects for their majors and more. We would like to work with Eighth College to map ways that students can be involved throughout their years at UC San Diego. Urban Studies and Planning will be using their Downtown location to bring their students closer to agencies, non-profit organizations and the city government, all of whom are interested in working to address some of the most difficult challenges of our region: homelessness, transportation, climate change and racial equity. In short, we can and should turn ourselves inside out and become more public facing as we grow into the next 5 to 10 years.

Congratulations on bringing this impressive plan forward for our consideration. Please let us know how we can support you as you build your new College.

Sincerely,

Carol Padden  
Dean, School of Social Sciences
April 25, 2022

John Moore  
Dean of Undergraduate Education

Dear Dean Moore,

I have read the Academic Plan for Eighth College, and I am pleased to provide a letter of support. As documented in the plan, the College will explore “themes such as migrations, multiculturalism, economics of climate change, resource management and pollution, impacts on language and culture, urban planning, educational systems, income inequality, and global health,” all of which are of central interest to the scholars in the Department of Sociology.

With my very best wishes for a successful launch,

Amy J. Binder  
Professor and Chair
April 22nd, 2022

John Moore
Dean, Undergraduate Education

RE: Letter of Support for the 8th College Academic Plan

On behalf of the Department of Structural Engineering, I would like to enthusiastically support the proposed academic plan for the 8th college. We endorse the broad theme of Engagement and Community. The curriculum in our Department is mainly focused toward providing the basic engineering skills necessary to develop safe, sustainable, accessible, and resilient infrastructure for society, which are critical for ensuring strong communities.

Not only does our Department have strong enrollment from students from California, we also have a diverse student body. Our students are very engaged in the community and are committed to using their engineering skills to help address critical societal issues. Our students were greatly affected by the murder of George Floyd and the pandemic, and many students shared their life experiences with the faculty in our regular town halls.

One area where our Department could contribute to the new 8th college academic plan is a general education course on technical writing. While many writing courses are available on writing in general, we believe that an emphasis on technical writing will help prepare students for their senior level courses where they must effectively synthesize their work and form objective but compelling arguments. We may incorporate concepts from project management and ethics into the course. We are still in the early stages of developing this idea for a course, but we felt that this could help reach the writing goals in the academic plan.

Should you need any more information, please do not hesitate to contact me at mccartney@ucsd.edu.

Sincerely,

John McCartney, Ph.D., P.E., F.ASCE
Professor and Chair
Department of Structural Engineering
April 26, 2022

TO: John Moore, Dean Undergraduate Education
FROM: Drew Calandrella, Executive Advisor, Department of Theatre and Dance
SUBJECT: Support for Eighth College Academic Plan

Please allow me to add support for the Eighth College’s Academic Plan on behalf of the Department of Theatre and Dance.

The location of this new living and learning community being in the Theatre District provides students from all majors and other interests to access performance venues and associated productions and activities literally outside of their living quarters.

In addition to creating a more student-centered campus by adding the Eighth College and thus decompressing enrollments in the Undergraduate Colleges, the theme of Engagement and Community is a compelling theme that promises great opportunity for students to engage in important disciplinary and interdisciplinary work.

It’s focus on community engagement with an eye towards combating structural racism and anti-Blackness is important and a focus that the Department of Theatre and Dance embraces.

As contained in the academic plan, the Department of Theatre and Dance has suggested a dozen courses that may satisfy the Alternatives requirements as described in the plan. More importantly, many of the courses are specific to Theatre and Dance as expressed through different cultures such as Asian American Theatre, African American Theatre, Chicanox Dramatic Literature, Latinx Theatre, Indigenous Theatre and Performance and Disability and Performative Exploration. Exposure to such coursework could help students view diversity, equity and inclusion through different lenses examining a common topic, Theatre and Dance, that is likely familiar to them.

In short, the Department of Theatre and Dance is fully committed to and fully supports the academic plan of the Eighth College and to directly support combating structural racism and anti-Blackness through the suggested courses to be offered through the Department of Theatre and Dance.

Drew Calandrella
Executive Advisor
Department of Theatre and Dance
April 26, 2022

John Moore
Dean of Undergraduate Education

Dear John:

I am writing to express the enthusiastic endorsement of the Department of Urban Studies and Planning (USP) for the proposed academic plan for Eighth College.

The proposed theme of “Engagement and Community” is well aligned with the UC San Diego mission to be a student-centered, research-focused, and service-oriented university. It is also well aligned with a variety of other campus priorities—I’m writing this from my office in the new Public Engagement Building in the School of Social Sciences, for example; our campus justly boasts of its designation as an Ashoka Changemaker campus based on its commitment to social innovation and engaged service learning; and the opening of UC San Diego’s downtown building at Park and Market, and the blue line trolley, create new opportunities to connect general education on campus to opportunities to engage the broader community and region. The proposed academic plan for Eighth College seizes the moment.

The proposed general education curriculum, combining “alternative courses” for breadth and a sequence of college-specific “engagement courses” leading to a community-based capstone project, is sound and well-designed. The model is also familiar to my department – there are many similarities between the proposed plan and our successful and well-reviewed undergraduate BA curriculum in USP, which also includes sequential courses that combine rigorous instruction with civic engagement, and which also culminates in a community-based capstone project – and we are pleased to see this model adopted on a larger scale, to serve more students in other majors. We also would welcome inclusion of USP courses among the alternative courses meeting Eighth College requirements, as proposed here, subject, of course, to the review of the relevant Eighth College committee.

The learning objectives for the proposed general education classes are appropriate, and articulate values of anti-racism and inclusion that are consistent with the mission of the University of California.

In short: This is an excellent academic plan. I am delighted to endorse on behalf of USP.

Sincerely,

Isaac Martin
Professor and Chair
April 21st, 2022

To: Academic Senate
From: Ricardo Dominguez, Chair, Visual Arts Department/ QI, UCSD.
Concerning: Eight College, UCSD

Dear Committee,

The Department of Visual Arts support the development of Eighth College on two levels: one, the importance of supporting UCSD growing undergraduate communities to have a robust academic and social experience while attending; two, the department also considers the core research theme of the college being ‘Engagement & Community.’ The Department of Visual Arts had a rich history of art and activism, of public culture research and practices, ecological art, computing arts as social art, and border art concerns since its founding in the late 1960s’. As well as, current research by Professor Teddy Cruz and Kyong Park on Urban Design, Oceans and Art lead by Dr. Lisa Cartwright, Eco-technologies at Design Lab by Dr. Pinar Yoldas, A.I and Machine Learning by Dr. Memo Atken, and Indigenous Futurism lead by Dr. Elizabeth Newsome and Dr. Mariana Wardwell Bote. The department also fully supports Eighth College seeking to establish critical community service learning, anti-racist, and proactive dialogues with communities beyond UCSD. The Eighth College pedagogical goals always reflect the vision of our Speculative Design undergraduate major, one section our department that has been consistently growing, whose primary focus to to imagine the local and planetary needs that must be designed in order the difficulties we face with the Anthropocene, especially communities who must face these climate shifts first, socially and economically.

The Eighth College has a proposed academic project also has a robust four course sequence that culminates in a community-based capstone project that encourages multiple forms of social engagement, that also allows transfers students to engage in the projects upon entering. This new college proposal can become an important activation of many of our current concerns as a Research 1 university that can offer not only and important technologies, but also allow know-experience bridges between social divides and disparities on multiple scales. This is especially important in the current COVID-19 pandemic and global conflicts we are facing, the questions that Eighth College is calling on the undergraduate community that it will create is both unique and necessary. The support for the demands by the Black Student Union and the Black Graduate and Professional Student Association, the Engagement & Community after murder of George Floyd, the continuing murders of people of color aligns with campus-wide efforts to combat structural racism. As detailed below, structural racism and the role of community are fundamental in the college’s core curriculum. A curriculum and vision that the Department of Visual Arts fully supports.

Please do not fail to contact me should you any questions now or in the future.

Regards,
Ricardo Dominguez, Chair, Department of Visual Arts, UCSD
Principal Investigator, CALIT2/QI, UCSD
Hellman Fellow, UCSD
Society for the Humanities Fellow, Cornell University (2017/18)
Rockefeller Arts & Humanities Fellow, Bellagio Center, Italy, (2019).
Democracy & Inequality Fellow, UCLA (2020/21)
Cell: 619-322-7571
e-mail: rrdominguez@ucsd.edu
December 12, 2022

JOHN MOORE, Dean
Division of Undergraduate Education

SUBJECT: Eighth College Academic Plan

Dear Dean Moore,

The Undergraduate Council reviewed the Eighth College Academic Plan and recommended that the San Diego Division approve the plan, as proposed. As part of their review, the Undergraduate Council considered comments from the Educational Policy Committee and the Committee on Planning and Budget. Senate Council discussed the proposal at its December 5, 2022 meeting. Senate Council endorsed Undergraduate Council’s recommendation that the San Diego Division approve the Academic Plan and approved its placement on a Representative Assembly meeting agenda. The comments from the Senate Council meeting are summarized below and the Undergraduate Council’s response is attached.

EPC is enthusiastic about the spirit of the Engagement Program but is still concerned with how the College will accomplish its vision for the capstone course with the resources available. While acknowledging that the upper-division capstone course will not be offered until Fall 2025, UGC noted the immense workload to operate courses such as these, and opined that a few years may not be enough time to develop sufficient partnerships in the community to accommodate all of the College’s students. It was recommended that a more detailed resource plan be developed in the future to address these concerns. Senate Council agrees with these concerns and suggests the enormous promise of the College will only be realized with sufficient funding and staff. In addition, Appendix B lists Synthesis 100, which is a course from Seventh College, so it was unclear if that was intentional or if that was supposed to be a different course title.

Sincerely,

Nancy Postero
Chair
San Diego Divisional Academic Senate

Attachment

cc: Christine Alvarado, Associate Dean, Division of Undergraduate Education
Hailey Caraballo, Project Policy Analyst, Division of Undergraduate Education
John Hildebrand, Senate Vice Chair
Lori Hullings, Senate Executive Director
Alison Sanders, Assistant Vice Chancellor, Academic Affairs
Elizabeth H. Simmons, Executive Vice Chancellor, Academic Affairs
November 22, 2022

PROFESSOR NANCY POSTERO, Chair
Academic Senate, San Diego Division

SUBJECT: Proposal for Eighth College Academic Plan

The Undergraduate Council reviewed the academic plan for Eighth College at its November 18, 2022 meeting. The Council appreciates the updated proposal and responses to our previous comments. We recommend that the Academic Senate approve the proposed Eighth College Academic Plan.

UGC is forwarding this Academic Plan and recommends that it be placed on an upcoming Representative Assembly meeting for Divisional approval.

Sincerely,

Bonnie Kaiser, Chair
Undergraduate Council

cc: J. Hildebrand
    L. Hullings
    J. Lucius
    M. Rabinowitz-Bussell
At its January 9, 2023 meeting, the Graduate Council supported a proposal from the Herbert Wertheim School of Public Health and Human Longevity Science to discontinue the Master of Advanced Studies degree in Leadership of Healthcare Organization. In accordance with Appendix IV of the Manual of the San Diego Division of the Academic Senate, the proposal was reviewed by a Senate ad hoc committee assigned to review the discontinuation or transfer of undergraduate and graduate degree programs. The ad hoc committee’s findings are below.

Timothy Gentner, Chair
Graduate Council

The complete proposal submitted by the Herbert Wertheim School of Public Health and Human Longevity Science is available for review: [https://senate.ucsd.edu/media/617697/sph-proposed-discontinuation-of-mas-lhco.pdf](https://senate.ucsd.edu/media/617697/sph-proposed-discontinuation-of-mas-lhco.pdf)

Senate Ad Hoc Review Committee Report

Review of Proposal to Discontinue Degree Program

- Herbert Wertheim School of Public Health and Human Longevity Science: Proposal to Discontinue the Master of Advanced Studies in the Leadership of Healthcare Organizations (PB82)

**Recommendation:** The Senate Ad Hoc Committee endorses the Herbert Wertheim School of Public Health and Human Longevity Science proposal to discontinue the Master of Advanced Studies in the Leadership of Healthcare Organizations (PB82).

**Initiation of proposal:** The Herbert Wertheim School of Public Health and Human Longevity Science submitted their request to discontinue the MAS-LHCO degree to the Graduate Council (GC) in a memo dated August 29, 2022. GC reviewed the proposal and notified the Departments that it had initiated the procedures outlined in Appendix IV – Policy and Procedures on Transfer, Consolidation, Disestablishment, and Discontinuance of Academic Programs and Units in a memo dated November 3, 2022.

**Reason for action:** Program landscape and financials. The MAS-LHCO is a self-supporting graduate professional degree program (SSGPDP). The Program has indicated that competitive programs, particularly those able to offer fully online curricula, have driven enrollments to the program down. As a self-supporting program, the low enrollments have a drastic impact on the program’s financial operations.

**Adverse impacts:** There are no adverse impacts. Students who are currently in the program will be able to complete the program by August 30, 2023.
Procedural guarantees for affected parties: The Program has identified each student and their pathway to completion. The Program will work with the remaining students to ensure their degree completion.
REPORT OF THE GRADUATE COUNCIL

At its October 10, 2022 meeting, the Graduate Council approved a proposal from the Rady School of Management to amend Divisional Senate Regulation 702. *Requirements for the Master of Business Administration (M.B.A.) Degree*, Section B, to reduce the number of core curriculum units from 48 to 40 and increase the number of elective units from 44 to 52. The total number of units required to complete the program, 92, will remain unchanged.

The School proposed the amendment to allow changes to the existing MBA Program of Study by removing a core course, and reducing the current two-course capstone sequence to one core capstone course.

The Council is supportive of this academic endeavor and recommends that the Representative Assembly endorse the proposal.

Timothy Gentner, Chair
Graduate Council

The complete proposal submitted by the Rady School of Management is available for review: [https://senate.ucsd.edu/media/617718/rady-proposed-changes-to-mba-sd-702.pdf](https://senate.ucsd.edu/media/617718/rady-proposed-changes-to-mba-sd-702.pdf)

*702. Requirements for the Master of Business Administration (M.B.A.) Degree [En 6/8/06; Am 5/22/07; Am 3/12/13]*

The degree of Master of Business Administration (MBA) will be granted on the following conditions:

(A) Admission

The candidate shall have:

1. Fulfilled the normal requirements for admission to the Graduate Division of the University of California, San Diego, as specified by the Graduate Council and the Dean of Graduate Studies, except that
   a. the Graduate Management Admission Test (GMAT) may be substituted for the Graduate Record Examination (GRE);
   b. the GMAT may be waived in specified approved instances, and
2. Met additional requirements that may be specified by the Rady School of Management.

(B) Program of Study

The candidate shall complete at least 48 quarter units constituting the core curriculum and at 44 remaining quarter units of electives, of which no
more than 12-quarter units may be taken outside the Rady School of Management. Only courses in which the candidate is assigned grades of A, B, C, or S, may be counted in satisfaction of the requirements for the M.B.A. degree. All students will complete a capstone project during their program. [Am 5/22/07, Am 3/12/13, 5/19/20]

(C) Residency

The candidate must register for at least six academic quarters.
On December 6, 2022, the Health Sciences Faculty Council (HSFC) voted to approve the proposed revisions to the Bylaws of the Faculty of the School of Medicine. Dr. Sean Evans, Associate Dean for Undergraduate Medication Education, UC San Diego School of Medicine, presented the rationale for the proposed changes. The School of Medicine Committee on Educational Policy (SOM CEP) has also endorsed these proposed revisions. The rationale for the changes is described below.

The School of Medicine (SOM) sees an opportunity to improve oversight of medical students as they progress through the M.D. degree curriculum. Currently, the SOM Standing and Promotions Committee (SOM/SPC) serves a dual role. Based on student and faculty feedback, as well as peer institution practices, the SOM proposes replacement of the SOM/SPC with a two-tiered committee system with well-delineated roles for each committee.

The proposed SOM/Comprehensive Longitudinal Equitable Assessment and Reporting Committee (SOM/CLEAR) will assume responsibility for assessing each M.D. degree student’s performance on a quarterly basis. Students with appropriate performance will be advanced in the curriculum. Students who are struggling in academics, professionalism, or both, will collaborate with the SOM/CLEAR to define, and engage in, needed remediation activities. SOM/CLEAR will not have the ability to dismiss a student or deny them further registration; interactions between SOM/CLEAR and the student are collaborative. If SOM/CLEAR feels that a student is unable to meet the academic, technical, or behavioral standards of the SOM, they may refer the student for review by the separate SOM Standards Committee (SOM/SC).

SOM/SC is an evolution of the prior SOM/SPC and is empowered to dismiss or deny further registration to a student. In this two-tiered model, SOM/SC only interacts with students whose performances necessitate such consequential decisions.

The implementation of SOM/CLEAR will be paired with a shift in curricular design and assessment of the M.D. degree program, providing SOM/CLEAR with a greater wealth and diversity of data, allowing robust assessment, and support, of student performance. This curricular change will begin with the class of medical students entering in fall 2023 and expand to years 2, 3, and 4 of the SOM curriculum as the fall 2023 cohort advances in training. To minimize changes in policy for pre-existing students, the SOM proposes that SOM/CLEAR will only assess students who enter in fall 2023 or later. For students who entered the M.D. degree program prior to fall 2023, SOM/SC will continue to fulfill the dual roles of the prior SOM/SPC. For the crossover period, the UC San Diego SOM Advisor and Student Handbook will delineate SOM/SC functions and procedures based on the student’s year of matriculation.

Additional changes are proposed, follows:

- SOM/CEP: The title of the position of the Associate Dean for Educational Technology, Innovation, and Assessment is changing to the Associate Dean for Assessment, Evaluation and Educational Technology. Removal of the position of Assistant Dean for Educational Technology and Assessment, as this position no longer exists. It is proposed that title of the Dean for Medical Education change to Vice Dean for Medical Education, to reflect the current title.
- SOM/CCC: It is proposed that the School of Public Health Associate Dean for Education and Student Affairs be added to the SOM as an ex officio member without vote. The rationale for this addition is to increase communication and collaboration between the SOM and the SPH related to SOM courses with public health content and/or are taught by SPH faculty.

- SOM/EC: The SOM will offer new Elective Concentrations beginning in fall of 2023. Language is proposed to reflect the EC’s oversight of the Elective Concentration requirement.

- SOM/RAC: Changes are proposed to remove language referring to the selection process for student representatives. The student representatives are not appointed by the SOM/CEP. Student representatives may be appointed by the SOM/RAC and members of the SOM administration.

The proposed revisions are noted in red text in the attached document.

Marianna Alperin, M.D., M.S.
Chair, Health Sciences Faculty Council

Attachment:
Appendix 5.7: Bylaws of the Faculty of the School of Medicine, UCSD. Proposed revisions are noted.
5.7 **BYLAWS OF THE FACULTY OF THE SCHOOL OF MEDICINE**

I) **FUNCTIONS**

All faculty of the School of Medicine (SOM) and Skaggs School of Pharmacy and Pharmaceutical Sciences (SSPPS) are considered Health Sciences (HS) faculty. Therefore, the HS Faculty Council and standing committees assume some duties for the SOM and SSPPS when they are not specifically required for the operation and accreditation of the individual school, as detailed in the HS Bylaws. Standing committees required for the operation and accreditation of the SOM are described in the SOM Bylaws below.

The primary function of the Faculty of the UCSD School of Medicine shall be to authorize and supervise all courses and curricula for medical students, and to advise the Dean of the School concerning various matters, including the resources necessary to perform its missions and to implement the curricula as part of the shared governance process of UCSD Health Sciences. The SOM Faculty shall be responsible for determining the conditions for admission, testing, and promoting medical students, and determining the conditions for awarding the degree of Doctor of Medicine and recommending to the President candidates for the degree.

The SOM Faculty shall be responsible for selecting, training, and certifying students in Graduate Medical Education Programs. The SOM Faculty shall participate in selecting, training, and certifying health sciences graduate students to the Graduate Dean for research degrees. The SOM Faculty shall also participate in the training of other professionals.

II) **MEMBERSHIP**

The members of the SOM Faculty shall consist of:

A) Those members of the San Diego Division of the Academic Senate who hold appointments in SOM Departments or who hold an FTE, or portion thereof, assigned to the SOM.

B) Other Faculty and Academics, i.e., Clinical Professors, Adjunct Professors, Project Scientists, Research Scientists, Lecturers and any other series approved by HS/Faculty Council, who have appointments in SOM Departments and who devote 100% of their professional effort in support of the programs of the SOM.

C) Other UCSD Faculty who devote a significant proportion of their professional effort to the programs of the SOM; subject to annual approval by the HS/Faculty Council on recommendation of the HS/Nominating Committee, which shall solicit their nomination from SOM Faculty.

All other individuals who hold academic titles in Departments of the SOM shall be designated SOM Associate Faculty.
5.7 BYLAWS OF THE FACULTY OF THE SCHOOL OF MEDICINE

D) The Associate Faculty of the SOM shall be invited to attend all meetings of the General SOM Faculty and to participate in all discussions. Associate members may also be appointed to serve as voting members of Standing Committees or Subcommittees of the SOM Faculty, including the HS/Faculty Council, in which case voting privileges are restricted only as indicated in Section III of the Bylaws of the Health Sciences Faculty.

III) VOTING MEMBERSHIP

The voting Members of the Faculty of the School of Medicine shall consist of those members of the School of Medicine Faculty who are also members of the Health Sciences Compensation Plan (HSCP), salaried physicians or academic staff at the VA who hold a faculty appointment in the SOM subject to academic review, academics in the Research Scientist series in the SOM who hold 51% or greater appointments, and SOM emeritus faculty; with the provision that voting privileges shall be exercised in compliance with Legislative Ruling 12.75. All members of the Faculty, as defined above, shall have the privilege of voting. To ensure compliance with Legislative Ruling 12.75, on those occasions when the Faculty is either taking final action on any matter for the Academic Senate or advising in the name of the Senate, votes of Senate and of non-Senate members shall be recorded separately and only votes of Senate members will be transmitted. Compliance with Legislative Ruling 12.75 also allows that all eligible faculty can vote on questions that will be referred for final Senate action to another Senate agency, such as the HS/Faculty Council or campus Graduate Council.

IV) OFFICERS

In compliance with the desire of the SOM and the HS faculty to take advantage of efficiencies where possible, the Officers of the Faculty of the SOM shall consist of the Officers of the Health Sciences Faculty Council, as described in “Section IV Officers” of the Bylaws of the Health Sciences Faculty.

V) MEETINGS

The Faculty of the SOM shall meet at least once during the academic year and, in addition, on written request by twenty of its members as described in “Section V. Meetings” of the Bylaws for the Faculty of Health Sciences. In compliance with the desire of the SOM and the HS faculty to take advantage of efficiencies where possible, meetings may be in conjunction with all of the Health Sciences Faculty or specific to the Faculty of the SOM.

VI) COMMITTEES

In compliance with the desire of the SOM and the HS faculty to take advantage of efficiencies where possible, the Standing Committees of the Faculty of the SOM include the following Standing Committees of the Faculty of
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the Health Sciences, as described in “Section VI. Committees” of the Bylaws of the Faculty of Health Sciences; which section addresses quorum requirements for all Standing Committees:

A) Health Sciences Faculty Council

B) Health Sciences Committee on Planning and Budget

C) Health Sciences Faculty Rights and Welfare Committee

Although the Standing Committees listed above are described in the Bylaws of the Faculty of Health Sciences, they are essential to the function of the Faculty of the SOM. No change in these Bylaws may be made that will be in conflict with the Bylaws of the Health Sciences faculty, or with the Bylaws, Regulations, or legislative rulings of the Academic Senate of the University of California or of its San Diego Division.

In addition, the following Standing Committees are necessary for the specific functions of the Faculty of the SOM.

D) School of Medicine Committee on Academic Personnel (SOM/CAP)

The SOM/Committee on Academic Personnel shall consist of a Chair, a Vice-Chair, and five members of the full-time Faculty, four of whom must be Senate members appointed as specified in Article VI. F (paragraph 3). The members shall serve staggered 3-year terms. [Am 4/13/21]

This Committee shall review all salaried Clinical Faculty in the School of Medicine for appointments, accelerations, appraisals, career reviews, promotions or terminations, who may not otherwise be reviewed by the Divisional Committee on Academic Personnel; makes recommendations to the SOM/Associate Dean for Academic Affairs on the basis of these reviews; reviews and revises as necessary the criteria for appointment and advancement for the Faculty series in its purview. The committee also reviews the nonsalaried Clinical Faculty for appointment and promotion at the Associate or Full Professor rank. The committee reports to the HS/Faculty Council annually.

E) SOM/Committee on Educational Policy (SOM/CEP)

The SOM/CEP shall consist of a Chair ( to be selected from a past Chair of the SOM/Core Curriculum Committee or the SOM/Electives Committee or someone who has served on the SOM/CEP for a minimum of two years); a Vice-Chair ( the Chair of either SOM/Core Curriculum Committee or SOM/Electives Committee), the Chairs or representatives of the SOM/Core Curriculum Committee, SOM/Electives Committee, SOM/Associated Health Professions Education Committee, SOM/Continuing Medical Development Committee, and other individuals as deemed necessary by the HS/Faculty Council.
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Education, SOM/Graduate Medical Education Committee, SOM/Graduate Programs Education Committee, SOM/Recruitment and Admissions Committee, SOM/Comprehensive Longitudinal Equitable, Assessment and Reporting Committee, SOM/Standing and Promotions Standards Committee, and SOM/Student Affairs Committee; the Vice-Chair of the SOM/Core Curriculum Committee, Vice-Chair of the SOM/Electives Committee, and three at-large members, two of whom shall be elected by a vote of the SOM Faculty according to Bylaws of the Health Sciences Faculty, Section IV A. The at-large members shall serve staggered 3-year terms. At any given time, no less than seven members of CEP must be Senate faculty. [AM 1/28/14]

To provide appropriate liaison with other faculty committees performing activities of relevance to the SOM/CEP mission, the following individuals will serve as ex officio members without vote: the Vice Dean for Medical Education; the SOM Associate Deans for Admissions and Student Affairs, Undergraduate Medical Education, Graduate Medical Education; the Associate Dean for Continuing Medical Education and Faculty Teaching Development; the Assistant Dean for Educational Support Services; and the Chair or Co-Chair of the SSPPS CEP, and the SSPPS Associate Dean for Pharmacy Education. The SOM/CEP shall also include, ex officio without vote, the Associate Dean for Assessment, Evaluation, and Educational Technology, Innovation, and Assessment and the Assistant Dean for Educational Technology and Assessment. [Am 1/28/14, Am 4/12/16, Am 2/6/18]

The function of the SOM/CEP shall be to represent the Faculty in all educational matters, especially regarding the curriculum for undergraduate, graduate and continuing medical education and other aspects of educational policy. It has authority to take action on all educational matters that do not require a vote of the Faculty. SOM/CEP reports to the HS/Faculty Council for information or to resolve difficult problems, on request of more than one member of SOM/CEP, or on matters that must be presented to the full Faculty. The SOM/CEP shall establish liaison and coordination with the Academic Senate Committee on Educational Policy, Graduate Council, and appropriate student organizations.

The SOM/CEP shall have the following subcommittees:

1) SOM/Associated Health Professions Education Committee (SOM/AHPEC)

The SOM/AHPEC shall consist of a Chair, a Vice-Chair (chosen from among the other members of SOM/AHPEC by the HS/Nominating Committee) and four full-time Faculty members, including one
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based on the La Jolla campus and at least one based at the UCSD Medical Center, appointed as specified in Article VI. F. (paragraph 3). Membership shall also include the Director of the Department of Nursing at the UCSD Medical Center; the Dean of the SOM and the Chief of Staff Veterans Affairs San Diego Healthcare System, or their respective representatives. All members shall have the right to vote. Members shall serve staggered 2-year terms.

The Chair of SOM/AHPEC is a member of SOM/CEP, and shall be a member of the full-time Faculty. This is a joint committee of the Faculty and the Administration of UCSD Medical Center that reports to the SOM/CEP for approval and action.

SOM/AHPEC is charged with responsibility to perform the academic review of existing and new programs for education in the associated health professions which do not grant UCSD Health Sciences’ degrees and are not part of the Medical Doctor residency. The work of the committee includes an assessment of each program’s quality and its impact on other medical education programs both existing and new. The committee also advises the Chief Executive Officer, University of California San Diego Medical Center or other appropriate official regarding the impact of these programs on UCSD facilities.

2) SOM/Core Curriculum Committee (SOM/CCC)

The SOM/CCC shall consist of a Chair (appointed for a two year term), a Vice-Chair and a minimum of twelve other members, at least ten of whom should be full-time Faculty, appointed as specified in Article VI. F. (paragraph 3). Members shall serve staggered 3-year terms. The Associate Dean for Undergraduate Medical Education, the Associate Dean for Pharmacy Education, the Associate Dean for Assessment, Evaluation, and Educational Technology, and the School of Public Health’s Associate Dean for Education and Student Affairs, Innovation, and Assessment, and the Assistant Dean for Educational Technology and Assessment shall serve as ex officio members without voting privileges. 

The function of the SOM/CCC shall be to recommend to the SOM/CEP that curriculum which shall be required of all undergraduate medical students. The SOM/CCC shall identify and recommend to the SOM/CEP the time that shall be allocated to each course. It will focus its duties on the core courses of the SOM. SOM/CCC shall approve a Course Chair who will act as the instructor of record and provide oversight for each course.
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The SOM/CCC shall have joint responsibility with the SOM/Electives Committee (SOM/EC) for those courses that fulfill the requirements for direct patient care responsibility, as described in Article VI.E.3.

3) SOM/Electives Committee (SOM/EC)

The SOM/EC shall consist of a Chair (appointed for a two-year term), a Vice-Chair and a minimum of twelve other members appointed as specified in Article VI. F. (paragraph 3). Members shall serve staggered 3-year terms. The Associate Dean for Undergraduate Medical Education shall serve as an ex officio member without voting privileges. [Am 2/6/18]

The SOM/EC shall make recommendations to the SOM/CEP concerning elective courses and administration of the undergraduate requirement for satisfactory completion of the elective component of the curriculum (including the Independent Study Project and Elective Concentrations).

The SOM/EC shall review new preclinical electives, third-year electives, fourth-year electives, and SOM graduate course proposals that pertain to medical students. Those graduate courses in which there is a clear time conflict which would prohibit medical students from enrolling in the courses, or are deemed to be specialized to the point that medical students would not enroll except in rare and specialized situations will be reviewed by the SOM/GPEC. The Chair of SOM/EC and the Associate Dean for Undergraduate Medical Education will determine which graduate course proposals are appropriate for SOM/EC review. [Am 1/28/14]

The SOM/EC shall have the primary responsibility to perform reviews of new and existing advanced senior clerkships and all elective courses, including those with direct patient care. The SOM/EC shall meet with the SOM/CCC at least once per year to discuss the portfolio of all electives, including those with direct patient care, and shall consult with the SOM/CCC on the status of direct patient care electives at other times as needed. The Chair of the SOM/EC will consult with the Chair of the SOM/CCC on electives for which a determination needs to be made as to whether they involve direct or non-direct patient care responsibility; if necessary, the proposals shall be reviewed by two SOM/CCC members who will assist the SOM/EC in making this determination.

SOM/EC shall also have joint responsibility with the SOM/CCC as described in Article VI.E.2.

4) SOM/Graduate Medical Education Committee (SOM/GMEC)
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The SOM/GMEC shall consist of a Chair, a Vice Chair and a minimum of six other members, at least five of whom shall be full-time Faculty, appointed as specified in Article VI. F. (paragraph 3). Members shall serve staggered 3-year terms.

Additional voting membership on the SOM/GMEC shall also include the Associate Dean for Graduate Medical Education (GME) and Accreditation Council for Graduate Medical Education (ACGME) Designated Institutional Official (DIO), residents nominated by their peers, representative Program Directors, the Director of GME, and GME administrators in order to comply with ACGME requirements. The Chief of Staff Veterans Affairs San Diego Healthcare System and the Chief Medical Officer of the UC San Diego Health System, or their designees, are invited to attend all meetings.

The function of the SOM/GMEC shall be to ensure that clinical graduate training programs offered by departments of the SOM meet institutional and national performance standards, including ACGME and American Board of Medical Specialties (ABMS) standards. The SOM/GMEC shall assume all functions not otherwise specified herein as required by ACGME. The SOM/GMEC shall report to the SOM/CEP and shall advise the Vice Chancellor Health Sciences. The Dean of the SOM/GMEC may create subcommittees or task forces in order to maintain compliance with ACGME requirements.

The SOM/GMEC receives input regarding institutional and ACGME guidelines from the SOM/GMEC Executive Committee, which meets monthly. Membership of the SOM/GMEC Executive Committee includes the SOM/GMEC Chair and Vice-Chair, subcommittee Chairs, the Associate Dean for GME/DIO, the Director of GME, and GME administrators as needed. The SOM/GMEC Executive Committee has a reporting responsibility to SOM/GMEC.

5) SOM/Graduate Programs Education Committee (SOM/GPEC)

The SOM/GPEC shall include ex-officio, with vote, the Associate Vice Chancellor for Scientific Affairs, a minimum of three other SOM Faculty, appointed as specified in Article VI. F. (paragraph 3), plus the Health Sciences representative to the campus-wide Graduate Council. At large faculty members shall serve staggered 3-year terms.

The SOM/GPEC shall monitor and make recommendations on 1) SOM financial and other support of graduate programs; 2) SOM learning environment for graduate students, postgraduate academic trainees and medical students pursuing research; and 3) new SOM graduate programs or major
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changes or expansions in existing programs. These recommendations and proposals will be presented to SOM/CEP, after which the Chair of the SOM/CEP shall present them to the HS/Faculty Council. Proposals for new or changed/expanded graduate programs shall then be submitted to Graduate Council.

The SOM/GPEC shall have the responsibility to perform reviews of new and existing SOM graduate courses that would pertain only to graduate students, and not medical students. The SOM/EC is responsible for reviewing SOM graduate courses that pertain to medical students. The Chair of the SOM/EC and the Associate Dean for Undergraduate Medical Education will determine which graduate courses are appropriate for the SOM/EC to review, and which courses should be referred to the SOM/GPEC for review, as described in Article VI.E.3. [Am 1/28/14]

Periodic reviews of graduate programs involving the SOM are conducted by the Office of Graduate Studies on behalf of Graduate Council. The SOM/GPEC is available as needed to assist in these reviews.

6) SOM/Recruitment and Admissions Committee (SOM/RAC)

The SOM/RAC shall consist of a Chair, a Vice Chair and members appointed as specified in Article VI. F. (paragraph 3). The SOM/RAC may also provide for student participation. In addition, a representative from the Administration shall be appointed with the privilege to vote. Members shall serve staggered two-year terms with an option to renew. The terms of SOM/RAC members shall be limited to three consecutive two-year terms. [Am 1/28/14] [Am 2/6/18]

The SOM/RAC shall determine the conditions for the admission of undergraduate medical students, including but not limited to the educational requirements, policies and procedures for selection, the sequence for admission of candidates, and shall participate in other aspects of admissions process. [Am 1/28/14]

An Executive Committee shall be established with duties as set forth in the Policies and Procedures of the SOM/RAC as approved by the SOM/CEP. It shall consist of the Chairperson of the SOM/RAC, a representative from the Administration other faculty members, and may include SOM students, to be selected by the Chairperson of the SOM/RAC and approved by the SOM/CEP. [Am 1/28/14] [Am 2/6/18]
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7) SOM/Comprehensive Longitudinal Equitable Assessment and Reporting Committee (SOM/CLEAR)

The SOM/CLEAR shall consist of a Chair, a Vice Chair and twenty other members appointed as specified in Article VI. F. (paragraph 3). Members shall serve staggered 3-year terms. The Associate Dean for Undergraduate Medical Education, the Associate Dean for Admissions and Student Affairs, the Associate Dean of Diversity and Community Partnerships, the Associate Dean for Assessment, Evaluation, and Educational Technology, the Assistant Dean for Curricular Affairs and Accreditation, and the Director of Wellness Initiatives, shall serve as ex officio members without voting privileges.

SOM/CLEAR is charged with reviewing the academic performance of students, beginning with the class of students entering medical school in fall 2023. The SOM/CLEAR is charged with making decisions regarding student standing and future courses of action, with the exception of decisions regarding dismissal or denial of further registration. If the SOM/CLEAR has concerns regarding a student’s potential inability to successfully meet MD program requirements or the SOM’s Technical Standards, the SOM/CLEAR shall refer the student to the SOM/Standards Committee. Using all available data on student performance, the SOM/CLEAR is charged with determining that a student is ready for promotion to subsequent years. Beginning with the class of students entering medical school in fall quarter 2023, SOM/CLEAR is to examine the records of each student prior to graduation and certify to the HS/Faculty Council that the requirements for the M.D. degree at the UCSD SOM have been met.

8) SOM/Standing and Promotions Standards Committee (SOM/SCSPC)

The SOM/SCSPC shall consist of a Chair, a Vice Chair and sixteen fourteen other members appointed as specified in Article VI. F. (paragraph 3). Members shall serve staggered 3-year terms. [Am 1/28/14] [Am 2/6/18]

Additionally, the Associate Dean for Undergraduate Medical Education, the Associate Dean for Admissions and Student Affairs, and the Associate Dean of Diversity and Community Partnerships shall serve as ex officio members without voting privileges. [Am 2/6/18]

This Committee will be concerned with the academic performance of students, in both clinical and non-clinical courses. At the end of each quarter the SOM/SPC is charged with examining the records of all students and making decisions regarding the future course of action. Using all available data on student performance, the SOM/SPC is also charged with determining that a student is ready for promotion to subsequent years.
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The SOM/CLEAR may refer students to the SOM/SC for review. The SOM/SC shall examine the performance of students who may be at risk of not meeting MD program requirements or the SOM’s Technical Standards. The SOM/SC has the authority to make decisions regarding student standing and future courses of action, including dismissal or denial of further registration.

The SOM/SC shall review the academic performance of students entering medical school in fall 2022 and earlier and determine if the students are ready for promotion to subsequent years. The SOM/SC is also to examine the records of each student entering medical school in fall 2022 and earlier, and prior to graduation and certify to the HS/Faculty Council that the requirements for the M.D. degree at the UCSD SOM have been met. [Am 1/28/14]

SOM/Student Affairs Committee (SOM/SAC)

The SOM/SAC shall consist of a Chair a Vice Chair and five other members appointed as specified in Article VI. F. (paragraph 3). Members shall serve staggered 3-year terms. Additionally, the Associate Dean for Admissions and Student Affairs, the Associate Dean for Undergraduate Medical Education, the Associate Dean of Diversity and Community Partnerships, and the Director of Wellness Initiatives will serve ex officio without vote. [Am 2/6/18]

This committee shall deal with student affairs other than those concerned with the admissions process or academic performance.

SOM/Nominating Committee (SOM/NC)

The SOM/Nominating Committee shall consist of seven full-time Faculty members (two of whom shall be non-Senate faculty and not more than two of whom shall be from any one department) who shall be elected by the Health Sciences Faculty from among those nominated by the HS/Faculty Council (two nominees for each open position). The current members of the Committee shall elect the Chair from among the Committee membership each year. The members shall serve staggered 3-year terms.

This Committee shall submit a slate from which the Faculty Officers will be elected, as specified in Health Sciences Bylaws Article IV A and SOM Bylaws Article VI. F. (paragraph 3).
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This Committee shall nominate all Chairs, Vice-Chairs and committee members for standing committees of
the Health Sciences and School of Medicine faculty, in consultation with the current committee Chairs and
relevant Deans, except those specified to be elected by the Faculty as a whole, or as otherwise specified in
the Bylaws. [Am 2/6/18]

The HS/Faculty Council, on recommendation of the HS/Nominating Committee, shall appoint all Chairs,
Vice-Chairs and committee members prior to the September 1 start of their term of office. Appointment of
Chairs, Vice-Chairs and members of these committees is subject to approval by a majority of the
HS/Faculty Council. Each Committee Chair appointed shall serve a one-year term, with the possibility of
reappointment to one additional year.

The SOM/Nominating Committee shall also recommend to the Health Sciences Deans the names of
Faculty for service on Administrative Committees, as needed. It shall make other nominations from time to
time as required by the HS/Faculty Council or the Health Sciences Deans.

VII) PARTICIPATION OF THE ADMINISTRATION ON COMMITTEES

The Dean of the SOM shall appoint members of his or her staff to serve on each Committee of the Faculty of the
SOM (without privilege of vote, except as provided above for the SOM/RAC). These appointments shall be made
annually in consultation with the Chairperson-Elect of the Faculty of Health Sciences and the Chairs of the
respective SOM committees.

VIII) PARTICIPATION OF STUDENTS ON SOM COMMITTEES

Students in good standing may be appointed by their Class Steering Committee or other duly constituted body to
represent their class as members of SOM/CEP and its associated subcommittees. Student members of the
SOM/GMEC shall be postgraduate medical students (residents or fellows) appointed by their peers in their
divisions or departments. Each standing committee shall determine the number of student members to maintain
appropriate participation. [2/6/18 Am]

The privilege of voting on a SOM Committee shall be awarded each year to student members on the basis of a
majority vote by the faculty members of that committee or subcommittee. The faculty members shall determine
the number of student votes appropriate to each committee each year. Voting privileges shall be exercised in
compliance with Legislative Ruling 12.75, in that non-Senate members may only vote on questions that will be
referred for final Senate action to another Senate agency, such as the HS/Faculty Council or the campus
Graduate Council.
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IX) ELECTIONS

Except for special elections, election of Officers of the Faculty for any given academic year will be held as described in “Section VIII Elections” in Bylaws for the Faculty of Health Sciences.

X) AMENDMENTS

Initiative for amendment of the SOM Bylaws may be taken either by the HS/Faculty Council or by petition signed by five or more members of the Faculty of the SOM. Such amendments are to be submitted to the Faculty of the SOM in writing at least five days prior to a meeting, but approval of the amendment requires a two-thirds majority vote of those faculty responding to a mail ballot.

At the request of thirty-five (35) members of the faculty, submitted in writing to the Chair of the Health Sciences Faculty Council within ten calendar days after the posting of the minutes of a Council meeting to the Council’s website, any action of the Council shall be submitted to the vote of the full faculty of the Health Sciences. The results of any such referendum are conclusive, and the matter may not be reconsidered for a period of 50 days.
January 10, 2023

Nancy Postero, Chair  
San Diego Divisional Academic Senate

SUBJECT: Proposed Amendments to San Diego Senate Manual Appendix 5.7, Bylaws of the Faculty of the School of Medicine

Dear Chair Postero,

The Committee on Rules and Jurisdiction (CRJ) reviewed the proposal to amend San Diego Senate Manual Appendix 5.7. Bylaws of the Faculty of the School of Medicine, and found the proposed amendments consonant with the code of the Academic Senate.

Sincerely,

Steve Constable, Chair  
Committee on Rules and Jurisdiction

cc: J. Hildebrand  
    L. Hullings

Attachments
REPORT OF THE UNDERGRADUATE COUNCIL

At its October 14, 2022 meeting, the Undergraduate Council approved a proposal from Revelle College to amend Divisional Senate Regulation 605, Academic Requirements of Revelle College, Section B, to provide clarifying language on graduation requirements. The College is requesting to update Section B to provide streamlined requirements and increased flexibility for Revelle College transfer students.

The Committee on Rules and Jurisdiction has reviewed the proposed changes and finds them consonant with the Code of the Academic Senate. The Undergraduate Council is supportive of this proposal and recommends that the Representative Assembly approve the proposal.

Bonnie Kaiser, Chair
Undergraduate Council

The complete proposal submitted by Revelle College is available for review:

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605. Academic Requirements of Revelle College [En 5/18/65; Am 11/14/67; Am 1/30/01, Am 6/07/16]
(A) Degrees
Revelle College will recommend candidates for the degrees of Bachelor of Arts or Bachelor of Science, designated as a major. [EC 1/18/80]

(B) General Requirements [Am 10/25/77; Am 1/30/01, Am 10/14/14, Am 6/07/16]
(1) Revelle College students are required to demonstrate an acceptable level of basic knowledge in the humanities, fine arts, social sciences, language, mathematics, and the physical and biological sciences.
(2) The General Requirements are:
   (a) A five-course sequence (24 units) in an interdisciplinary Humanities program including two (6-unit) courses with intensive instruction in university level writing. Written work is also required in each of the remaining three (4-unit) quarter courses. [Am 3/19/85]
   (b) One course in the Fine Arts.
   (c) Three courses in Mathematics which shall include two courses of integral and/or differential calculus, and one course chosen from an approved list. [Am 6/07/16]
   (d) Five courses in the Physical and Biological Sciences to include one course in biology, one course in chemistry, one course in physics, and two courses chosen from biology, chemistry, physics, or from an approved list. [Am 6/07/16, Am 6/9/20]
   (e) Basic conversational and reading proficiency in a modern foreign language, or advanced reading proficiency in a classical language. This requirement can be met by passage of a UCSD proficiency exam (in which case the result is posted to the transcript), or by completion of the fourth quarter (or third semester) of foreign language instruction with a passing grade, or with an equivalent Advanced Placement Exam score of 4 or 5 or an SAT II Language Exam score of 700 or higher. [Am 11/25/80; Am 2/28/95; Am 11/04/03]
(f) Two courses in the Social Sciences, chosen from an approved list. [Am 11/27/90, AM 1/28/2014, AM 6/07/16]

(3) Transfer students accepted to Revelle College must meet the same general education requirements as students admitted as freshmen. Transfer students who have completed an approved Inter-segmental General Education Transfer Curriculum (IGETC-SR478) must meet the same mathematics and science requirements as students admitted as freshman, except for the mathematics, natural science, and humanities requirements, stated below in (a), (b) and (c). Courses taken prior to transfer that satisfy any or all of these requirements will be applied toward completion of the requirements.

(a) One upper-division writing course (4 units) in an interdisciplinary Humanities program

(b) Four courses in the Physical and Biological Sciences to include two courses from two different disciplines among biology, chemistry, and physics, and the remaining two chosen from biology, chemistry, physics or from an approved list.

(c) Three courses in mathematics to include one course of calculus, and two chosen from an approved list [Am 1/30/01, Am 10/14/14]

(C) Graduation Requirements

(1) The minimum requirement for graduation will be satisfactory completion of 180 units; 60 units must be from the upper division. [Am 10/24/72; Am 6/10/97, Am 6/7/17]

(2) A major shall consist of not less than 12 upper division courses. [Am 10/25/77; Am 11/27/90]