

COLLEGE OF ENGINEERING

Context: We are contemplating a potential expansion of the College and encourage continued discussions with faculty from Information and Computer Sciences (Natural Sciences) and the School of Architecture.

October 12 Presentation:

- [Engineering Presentation](#)
- [Engineering Presentation Video](#)

General Comment/Proposal

College of Engineering's Response

- Should some of the recommendations actually be implemented and the expansion of the College's offerings beyond just the "traditional" engineering programs, we would propose to rename the College of Engineering to be rebranded as the College of Engineering and Applied Science. This name is growing in use, especially for those engineering schools that are inclusive of computer science and other related degree programs. This suggestion was received favorably by the few computer science faculty with whom the College of Engineering has continued to have regular discussions.

School of Architecture

College of Engineering's Response

- We understand that reorganization with the College of Engineering is not desired by the School of Architecture. However, we will continue to meet to discuss potential collaborations on programs that are mutually beneficial to both parties including construction related courses that Architectural students could benefit from as part of their curriculum and a potential Construction Management program within the School of Architecture.

Revised Recommendations (as of October 13, 2020)

- Continue discussions with the School of Architecture to determine whether a reorganization will innovate and strengthen programs and collaborations across Architecture and Engineering.
- Collaborate with Civil Engineering on a joint hire to support Architecture and Construction Engineering programs.

Details

- The Mānoa Budget Team will meet with faculty in the School of Architecture on October 20. The team did meet with Dean Morioka and Interim Dean Chapman on Monday, October 5, 2020. The team read with interest the detailed response from the School of Architecture and the response from the College of Engineering.
- The team reviewed the numerous letters from Architecture faculty, students, alumni, and industry and community leaders about a potential reorganization of the School under the College of Engineering. The team understands that many believe a reorganization into Engineering is not the best fit due to fundamental differences in approach to the built environment. We also understand that many believe that the reorganization will lead to increased administrative efficiency, collaboration, joint programs and research across Engineering and Architecture. The team looks forward to having discussions with the faculty about these perspectives.
- Per Dean Chapman's presentation on October 12, 2020, the team understands that the Architecture faculty are open to a discussion about reorganizing with the Department of Urban & Regional Planning into a School of Architecture and Planning (in Social Sciences), or with the Department of Art & Art History, and potentially other creative units, into a School of Architecture, Art and Design. The team looks forward to discussing these ideas with the faculty.
- Regardless of the final decision, the team sees tremendous value in continuing discussions across these units to increase cross-unit collaboration, as we believe these will ultimately strengthen programs and increase opportunities for innovation for students and faculty.
- **Deans Chapman and Morioka continue to meet weekly to discuss relationship building and program opportunities between the School of Architecture and the College of Engineering.**

Department of Civil & Environmental Engineering

College of Engineering's Response

- **Our apologies for not formally addressing these recommendations in our original response but we did not believe a response was necessary because the College is in agreement with the recommendations and have already begun the discussions and outreach to increase awareness of the Construction Engineering program. This effort has included increased marketing on our webpage, social media, and outreach collateral, as well as aggressive engagement with developers, general and specialty contractors, the General Contractors Association of Hawaii, engineering and construction management consulting firms, and local high schools (initial focus on those with academies) and other educational partners. This outreach effort has also included the conversations with the School of Architecture with regard to a potential Construction Management program.**

Summary Recommendations

- Recommend the development of a recruitment strategy for the BS in Construction Engineering.
- Work with the UH community colleges to increase awareness of the new BS in Construction Engineering.

Details

- The Mānoa Budget Team has yet to meet with faculty in Civil & Environmental Engineering. The response from the College did not address the recommendations. The team is willing to meet with faculty in the department if a meeting is desired.
- **As we are actively progressing with this recommendation, we do not believe a meeting is necessary at this time, though external marketing and promotion of the Construction Engineering program by the University and not just by the College of Engineering would be appreciated.**

Department of Electrical Engineering

College of Engineering's Response

- While no final decision by the Administration has been made as to the reorganization of Computer Science under the College of Engineering, the College continues to support a recommendation to move Computer Science as a stand-alone department within the College of Engineering and to re-allocate the associated positions (faculty, staff, and teaching assistants) and funding (general funds, tuition, RTRF, and any other revenues generated by the Information & Computer Science Department) from the College of Natural Sciences to the College of Engineering.
- The College of Engineering and the Department of Computer Sciences would work directly with OVCAA on the development of any governance documents necessary to ensure smooth transition and continued operations for admission requirements, desired curriculum changes, graduation requirements, and tenure and promotion criteria and process.
- We would also need to have a more detailed understanding of the Computer Science Department's budgetary needs and the associated budget that is provided to the Department by the College of Natural Sciences as it appears the two colleges allocate budgets and budget authority to its departments in a different manner.
- Discussion on what to do with the BA in Computer Science continues including creating an inter-disciplinary program on computing with other degree programs.
- Discussions with local industry stakeholders about the reorganization of Computer Science with the College of Engineering have begun with favorable reaction to date.
- We recommend that the Electrical Engineering Department be renamed the Electrical and Computer Engineering (ECE) Department.

Revised Recommendations (as of October 13, 2020)

- Continue conversations to explore options on closer collaborations and possible reorganization with faculty in Information & Computer Sciences.

Details

- The Mānoa Budget Team met with the faculty in Information & Computer Sciences on Tuesday, October 6, 2020. The team met with the faculty in Electrical Engineering on Thursday, October 8, 2020. Summaries of meetings with department faculty will be posted on the Planning for Post-Pandemic Hawai'i website.
- The team understands that ICS faculty sentiment is mixed regarding reorganization to the College of Engineering. We understand that various options are being explored, including remaining as a unit in Natural Sciences; moving to the College of Engineering as a separate department; and moving selected faculty to the College of Engineering.
- The team understands that the Electrical Engineering faculty are open to reorganizing and see the benefit of various scenarios that have been presented.
- On October 12, Dean Morioka recommended combining Electrical and Computer Engineering into one department, with a separate department of Computer Science.
- We urge the faculty in both units to continue conversations to find innovative approaches to collaboration. The team supports the willingness of faculty to collaborate on new programs (Software Engineering, for example) as well as the work to-date to address the concerns raised in the external review of the Computer Science and Computer Engineering degree programs.
- Dean Morioka continues to meet weekly with a small group of Electrical and Computer Engineering faculty and Computer Science faculty, including both respective department chairs to discuss issues, concerns, and proposals for what a reorganization under the College of Engineering might look like. This includes a meeting in which Dean Morioka discussed this possibility with the entire Computer Science faculty at a regular faculty meeting on October 30.

Department of Mechanical Engineering

College of Engineering's Response

- Our apologies for not formally addressing these recommendations in our original response but we did not believe a response was necessary because the College is in agreement with the recommendations and have already begun the discussions with both SOEST (ORE) and CTAHR on the two specific recommendations.
- The College also agrees with the recommendation to highlight the Engineering Science degree program in the Catalog. We also include Engineering Science options in our discussions with the UH community colleges and our outreach with high school students.
- However, as mentioned in previous budget meetings, the College is working to submit a proposal to OVCAA to move the Aerospace Engineering track in the

Engineering Science program completely into the Mechanical Engineering Department as a concentration with the intent to incubate a stand-alone degree program in Aerospace Engineering housed within the Mechanical Engineering Department. A potential renaming of the Mechanical Engineering Department to include Aerospace Engineering once a formal Aerospace Engineering Degree is accredited would be proposed as often seen with other Mechanical Engineering Departments at other institutions with a stand-alone Aerospace Engineering degree program housed with the Mechanical Engineering program.

Revised Recommendations (as of October 13, 2020)

- Ensure program information for the BS in Engineering Science is available in the Catalog.
- Work with the UH community colleges to increase awareness of the new BS in Engineering Science.
- Continue collaboration with the Department of Ocean Resources Engineering (SOEST) on the development of an Ocean Engineering track within the BS in Engineering Science.
- Discuss the possibility of joint administration of the BS in Biological Engineering (CTAHR) with the College of Engineering.

Details

- The Mānoa Budget Team has yet to meet with faculty in Mechanical Engineering. The response from the College did not address the recommendations. The team is willing to meet with faculty in the department if a meeting is desired.
- As we are actively progressing with a number of these recommendations, we do not believe a meeting is necessary at this time, though external marketing and promotion of the Engineering Science program and tracks by the University and not just by the College of Engineering would be appreciated.
- The team learned that the faculty in Ocean Resources Engineering (SOEST) are collaborating with faculty in ME on an Ocean Engineering track. We believe that this program will draw students to UHM. The team supports this effort and looks forward to learning more as plans develop.
- The College of Engineering and ORE have already formed a curriculum committee and have begun the development of a proposed BS Degree in Engineering Science with a concentration in Ocean Engineering. Engineering faculty include faculty from both the Civil and Mechanical Engineering Departments.
- The faculty in the Department of Molecular Biosciences & Bioengineering (CTAHR) have proposed that the College of Engineering partner with MBBE in administering the ABET-accredited BS in Biological Engineering. The team supports this approach and looks forward to hearing more about this potential collaboration.
- The College of Engineering and CTAHR have begun discussions on the development of a curriculum committee and what a proposal for a co-hosted BS Degree program in Biological (or Agricultural) Engineering would look like.
- The effort to create a stand-alone degree program in Aerospace Engineering is being coordinated with and supported by Dean Brian Taylor of SOEST and a steering committee

has been formed to include ME Co-Chairs Lloyd Hihara and Weilin Qu, HSFL Director Luke Flynn, and HIGP faculty Peter Englert to guide the process of curriculum development and research coordination.

- Initial meetings regarding the Biomedical Engineering track within the Engineering Science degree program has also begun between the Electrical and Mechanical Engineering faculty and facilitated by interim Associate Dean David Ma and Assistant Dean Song Choi.