November 16, 2020

MEMORANDUM

TO: Michael Bruno, Provost

FROM: William Chapman, Interim Dean, School of Architecture
Laura McGuire, Director of Undergraduate Studies (BEnvD)

RE: Response to the Bachelor of Environmental Design Program Review Committee Report

The School of Architecture and the Bachelor of Environmental Design (BEnvD) program administration, faculty, staff, and students sincerely thank the efforts and time of the external Review Committee in evaluating our program. The process of collecting information and examining our program while preparing the report, along with the information exchanged in the review process was helpful and enlightening to our ongoing efforts to maintain excellence in the BEnvD. We have reviewed the Review Committee’s Academic Program Review Report received October 27, 2020 and are submitting responses to their specific recommendations.

We thank the Review Committee for strongly supporting the purpose, value, and effectiveness of the BEnvD degree program in their evaluation and address their recommendations below:

**Review Committee Recommendations:**

- **When financially possible and assuming continued growth, hire full-time faculty to make up for the two canceled tenure-line searches in AY 2019-20.**

During AY 2019-20 the SoA had begun searches for two new FTE specializing in community design initiatives and professional community outreach. However, both searches were cancelled due to the COVID-19 budget situation. We agree with the Review Committee that the loss of these lines poses a substantial difficulty for continuing to grow the curriculum and the expertise of faculty teaching in the BEnvD program. When the budgetary situation improves and new growth at UH-Manoa commences again – as we hope it will – we will request that these lines be reinstated so that we are able to hire two new, full-time faculty. We will continue our efforts at recruiting new students in order to foster university-wide growth that will fund these lines.

****

- **Emphasize hiring of female full-time faculty members to address gender imbalance in the faculty.**
Our current faculty ratio (including two full time non-tenure track faculty) is ten men to seven women. Of these, six women are tenure track faculty. Over the past several years, we have emphasized the hiring of women in the department to foster gender diversity among the faculty. Our hiring committees have held a commitment to diversifying the gender composition of our faculty in these more recent hires; of the six recently hired faculty, five (Cathi Ho Schar, Wendy Meguro, Karla Sierralta, Laura McGuire, and Phoebe White) are women and one was a man. Once we are able to hire full time faculty again, we will make a concerted effort to hire diverse faculty, while maintaining our highest commitment to faculty expertise and teaching capabilities.

****

- Study and address the relatively high attrition rate among incoming female BEnvD students.
- Foster professional and student organizations specifically focused on women much like the engineering industry does with the Society of Women Engineers and Women in Transportation.

The attrition rate among female students was discovered during the course of preparing the BEnvD report and we sincerely appreciate the Review Committee’s attention to it. Faculty have recently discussed several ways to ameliorate this apparent problem. Because we only discovered this by examining graduation rates over time, our initial objective is to determine at which point in the program that female students seem to be most often leaving. If it is broadly distributed across first through fourth years, this will pose a circumstance that differs from one in which they are leaving in a period clustered around a particular year or semester.

In Spring 2021, The BEnvD program director proposes to create an anonymous Diversity survey for existing female and non-gender conforming students that asks them to gauge their comfort level, learning environment, and the support they receive in the program. This survey would be developed in consultation with faculty and with the Director of Student Services. It would also request information on whether they have faced any negative circumstances or barriers during their time in the BEnvD program that have affected their learning environments. After interpreting this data, and if we identify some clear problems for female or non-gender conforming students, we may elect to form confidential focus groups for these students to discuss their concerns. With this data, we can work to develop strategies to better support these students if necessary.

Possible solutions include helping our AIAS chapter to develop an organization of women students in conjunction with AIAS. Unfortunately, there is no female-based national organization for women in architecture with which to coordinate. Although some larger chapters of AIA have committees for Women in Architecture, they are not nationally organized and there is currently no AIA Hawai‘i partner organization for women architects. However, faculty coordinators could help students to form a Women in Architecture group at UHM. We believe that such an organization would help with retaining female students and also might help with female recruitment. We would encourage such a fledging organization to consult with existing campus organizations, such as the Society of Women Engineers and Women in Transportation.
Faculty have also discussed folding in this survey with a more general survey pertaining to student satisfaction and retention, as well as interest in our graduate programs, including the proposed MArch program. This might be a more flexible option, as it would go to all BEvD students and could cover multiple topics. With this information, we might be able to pinpoint issues with retention and students’ future plans in a way that does not necessarily obviously target only female BEvD students.

The faculty will consider all of the issues that we would like to address, from female retention, to general BEvD student retention, and the level of interest in our graduate programs and develop student survey/s to collect further data in all of these critical areas.

****

- **Improve the security of studio spaces, in particular, as accessed through building elevators after hours**

We strongly agree that security in the building remains a problem, mainly due to the open elevator and the door code key system for studios that we currently have in place. SoA administration has contacted upper administration about these security issues, but thus far no resolution has been presented to us. Ideally, we would like to have a key card system installed throughout the building and have some way for the elevator to be closed during after business hours, so that only students and faculty could access the building at that time. We hope that UHM will continue to work towards creating a more secure facility for our students, faculty, and staff.

****

- **Continue to familiarize potential BEvD students—on the Mānoa campus and in the community— with concept of environmental design as opposed to the more familiar “architecture” to improve recruitment into the BEvD program.**

We are actively working to increase enrollment and to familiarize prospective undergraduates with the Environmental Design degree (versus a traditional “Architecture” degree) by holding dynamic Open Houses and to organize events at local STEM-focused high schools. This year, we are holding an online Open House in December to introduce students from on and off the island with our degree, also including prospective international students. In addition to our on-site Open Houses, we plan to continue to deliver yearly online presentations for those many students who cannot physically attend the Open House. The program directors and the Recruitment Committee are in the final stages of planning this multimedia presentation with break out rooms via Zoom, in order that prospective students be able to talk directly with program directors and faculty, as well as with students currently enrolled in the BEvD. We feel that we can reach a broader audience virtually and that students who are unsure about the subject of our degree programs will be more easily able to learn about the program by dropping in on their own time from different locations.

In this online venue, as well as in our traditional on-site open houses, the program director will work with student and faculty participants to provide a holistic picture of the BEvD as an interdisciplinary program that explores the design of the built environment at multiple scales.
With the online presentation especially, faculty will work to clarify that the degree is accessible to all students with interests in art, design, and in the built environment, no matter their previous training. Our Recruitment Committee is also increasing our annual outreach visits to STEM-focused high schools on O‘ahu. We are also currently in the process of renewing our CIP STEM designation, which may increase STEM-focused student interest in the program.

We will also continue to strengthen our ties with the Architectural Studies program at Honolulu Community College in order to help them develop a two-year program that mirrors the first two years of our BEnvD; this will give community college students who are interested in studying built environment design to understand the breadth and meaning of the BEnvD curriculum at an earlier stage within the CC program.

****

- **Develop coursework in structures and building materials, possibly in conjunction with the College of Engineering.**

- **Create a Master of Architecture (MArch) Degree to provide BEnvD students with a more efficient pathway to professional licensure in architecture.**

We have chosen to group these the above recommendations, to develop coursework in structures and materials and to evaluate the language requirements with the creation of the MArch degree. We see these as highly interrelated. At this time, the School does not plan to make major modifications to the BEnvD, as we plan to do so in tandem with the development of a MArch program. For an accredited MArch, students might require more coursework in structures and materials as a part of the pre-professional degree program to support the NAAB requirements for professional graduate architecture programs. We concur that these are areas that need stronger development in the BEnvD program and will endeavor to either alter the current subject matter of studios to strengthen instruction in on these topics, or to add one or more courses in these subjects in ways that will strengthen a proposed MArch degree.

However, some faculty have also proposed that we eliminate NAAB SPCs from our BEnvD course syllabi, as those currently responsible for designing the MArch program believe that we could cover all of the NAAB curriculum requirements within the MArch curriculum. This would simplify matters, and also allow the BEnvD to be more flexible and change as needed. Faculty will continue to discuss these options and the possibility of adding or changing coursework in conjunction with MArch planning.

If we do choose to add courses in structures and materials, modifying our General Education requirements and reducing the number of language courses from 4 to 2 is one very viable option. Faculty come down on different sides of this matter; many feel that having some foreign language exposure is very important for the humanities aspect of a BEnvD degree, as these courses not only introduce students to language, but also to culture and patterns of linguistic “thinking” that can be highly applicable to the many languages of design. We will commence further deliberation on required General Education and BEnvD coursework as faculty undertake development of the M.Arch degree.
In addition, we will endeavor to emphasize work in materials and structures in our existing classes, focusing on ARCH 220 and 321, Environmental Building Systems A and B. Some faculty have emphasized these subjects in their individual courses in the past. The Curriculum Committee will explore adding further instruction in these subjects across all sections of ARCH 220 and ARCH 321 by making explicit changes to emphasize these subjects in the generic syllabi for these classes, as is appropriate to the goals of these courses. We have a strong potential to reinforce these subjects and skills in our current, required design studios, and we will explore these possibilities first, before deciding to implement curricular changes, including new required classes.

****

- Consider modifying general education requirements to allow students to graduate more efficiently, including evaluation of the language requirements and offering BEnvD courses with W and O Focus designations.

At this time, our time to degree is approximately four years, and many students complete the degree in less time by enrolling in summer studios and study abroad programs. We believe that the vast majority of our students are graduating quickly and efficiently. However, we do see some pathways to increase the number of O and W designated courses in our existing curriculum.

For additional O courses, we see opportunities in our existing courses to designate one or more as an O course. Our upper division design studios, including ARCH 341, 342, AND 415 already contain significant Oral Communication components within the curriculum; the program director will research which courses might best fit the O designation and proceed with designation as appropriate.

The designation of W courses remains an ongoing issue in our curriculum, primarily due to staffing issues, as each section in a W course is limited to 20 students. Currently ARCH 371 is designated as a W course and we are developing a way in which a single instructor can teach two 20-person sections of the class.

ARCH 433 Professional Practice, Law, and Ethics might be adapted into a W course with some changes to the syllabus and allocating instructors for 20-student sections; we will explore this option.

There is an opportunity to make ARCH 272 (a lecture class of 50-70 students) a W course, since it requires a significant writing component, which has been graded by a single instructor in the past. In order to create a W course, we would need to locate several more instructors to hold 3 individual writing sections of no more than 20 students in conjunction with the twice-weekly lecture class. This could be accomplished if the instructor for 272 was assigned all of the separate writing sections, with at least three additional one-hour class meetings times per week. However, this option with its significantly increased contact hours would limit that professor’s ability to teach a second required course each semester due to workload policies. Another alternative, and one which is employed at several other peer institutions, would be to locate at least 3 TAs qualified to teach college writing in additional, one-hour sections each week for groups of 20 students enrolled in ARCH 272. We are exploring this option but locating TAs...
from among our own design graduate students with the necessary experience to teach intensive writing in architectural history and theory has proved challenging. (This is primarily because our graduate students are primarily educated in design, versus in more traditional humanities or social science fields in which writing is emphasized.) However, we will continue to explore the possibility of developing ARCH 272 into a W course, perhaps by employing writing TAs from other UHM graduate departments.

****

- **Find ways of improving student exposure to and competency in drafting software commonly used by professional architects, e.g. AutoCAD and Revit.**

The Review Committee’s report, the committee acknowledged that “due to the transient nature of particular software applications and the ability to learn these applications on the job, BEnvD coursework is better spent on design.” The faculty concurs with this assessment. In our current curriculum, we aim to engage students with currently used software as it relates to the course objectives (such as in ARCH 102 and in upper level required studios). However, we do not feel that software instruction should constitute the primary basis of particular courses.

Our students are currently taught the most popular and widely used design software in architecture and design programs across the country. The skills they learn allow them to be flexible and easily pick up additional design software as they grow. We focus on design rather than technical “drafting” since the BEnvD is a broad environmental design degree.

We believe that time in the BEnvD is best spent teaching students to be dynamic designers and to synthesize complex problems into design solutions; because of rapid changes in technology students should not become too dependent on any particular software to generate design solutions. Many faculty members also feel that focusing too heavily on software instruction might limit students’ creative potential. Should they become too reliant on the methods offered by software, they may not explore all possible design solutions to a problem – many faculty members encourage hand sketching as a formative step in design processes before rendering software is added to the project representation. Similarly, architectural design pedagogy at the national level emphasizes analog methods – drawing and model building – as critical components of design conceptualization and development prior to the use of software in design assignments. However, we will continue to provide students with competency in tools (both analog and digital) that allow them to conceptualize, represent, and communicate their design ideas.

We will continue to explore ways in which to encourage students to utilize current software in their work and to gain software literacy within the context of their studio coursework. We will also encourage students to take drafting software courses offered outside of the BEnvD program, such as those offered by the community colleges and the many courses offered online.

****

- **Provide more instructional/students support for ARCH 101 with the goal of improving retention.**
Basic design education in ARCH 101 requires substantial personal attention in order to retain students. Given the timely relevance of the interdisciplinary BEnvD to ongoing concerns with ecology and the development of sustainable buildings and landscapes, we anticipate that our enrollment will continue to grow. We see this growth each year in ARCH 101, our first course in the BEnvD sequence where our numbers keep increasing each year. It is a blessing that we are attracting more students but at the same time, this substantial growth poses a challenge to instructional faculty, where a single professor is tasked with educating at least 80-90 students in the hands-on fundamentals of design.

We strongly agree that we need to improve instructional support in this class and have done so by hiring several graduate TAs each year to assist the students. We find that the TA support is highly effective, as it gives undergraduate students opportunities to work directly with our graduate students, fostering mentorship among students. However, we have found that the currently allowable ratios between the number of students and TAs in studio courses (1 TA for every 20 students) is often insufficient for the personalized feedback and critique necessary for the best student success with ARCH 101, as well as ARCH 102 studio material. An ideal allocation would be 1 TA for every 12 students, and we hope that the university might consider making an exception to the standard TA ratio in this instance.

In addition, we will endeavor to identify any issues with retention throughout the entire first year, including in the second Design Fundamentals course, ARCH 102, which is almost as large as ARCH 101. Through the implementation of BEnvD student surveys mentioned above, we may be able to identify additional areas in which retention and student satisfaction could be improved.

****

- Create an ARCH 151-2 (World Architecture) sequence to replace both the HIST 151-2 and ARCH 271-2 requirements.

In Spring 2020, the Curriculum Committee explored the idea of replacing HIST 151/2 and ARCH 271/2 with a first year ARCH 151/2 World Architecture sequence. However, it was decided that this was not possible for two primary reasons:

1. After careful evaluation, the Curriculum Committee concluded this proposal is not possible because:
   - Hist 151 and 152, each carry a general education “foundation FGA and FGB” designation.
   - Arch 271 and 272, each carry a general education “diversification DH designation”.
   - These requirements are to be met independently. One course may not count as both foundation and diversification course.
   - “Diversification” courses must come from a different department than the courses that meet the “foundation” requirement.

In addition, students must also satisfy two of the three different areas of diversification: DA arts, DH humanities and DL literature. Our studio courses meet the DA designation, and Arch 271 and 272 meet the DH designation. These General Education requirements will not currently allow an architectural history survey course in the first year that would eliminate ARCH 271/272.
2. In addition to the constraints of the diversification requirements, the instructors of ARCH 271/2 feel that to make it a 100-level class would not meet the knowledge standards required in the architectural profession. The courses are included as a part of the BEnvD conforming to the requirements of a pre-professional degree under NAAB. NAAB standards require a higher-level history/theory curriculum than would be possible in a general, 100-level university audience; it would not meet the standards necessary for students to pass professional licensing exams. Both ARCH 271 and 272 also require analytical drawing and spatial analyses of historical architecture and landscapes that require students to have at least one year of foundation coursework in design, such as ARCH 101. The history/theory faculty strongly believe that these courses should remain at the 200-level, especially to prepare students for advanced work in architectural history and theory in the third-year course ARCH 371 Design Theory.

Faculty who teach ARCH 271/2 and the program director are also currently exploring the possibility of our BEnvD students enrolling in ART 175/6 (World Art and Architecture) as their 100-level history course in order to meet the diversification requirements currently fulfilled by HIST 151/2. Although this is still in the discussion stages, these 100-level classes are closely related to ARCH 271/2. Because they cover the basics of architectural history and histories of visual representation, they would provide a direct foundation in the history of the built environment and visual culture, which would improve student outcomes in ARCH 271/2. These courses would also align with first-year studio work, by providing a foundation in the history of visual representation at the same time that students are undertaking the Design Fundamentals studio sequence, which deals with matters of visual and spatial communication (ARCH 101 and 102).

****

- **Continue to work with the Mānoa Assessment and Curricular Support Center to improve BEnvD assessment efforts still further.**

The Dean and program director have reviewed the helpful presentation from the Mānoa Assessment and Curricular Support Center regarding the creation of rubrics from our SLOs on which to measure student performance in more precise percentages. The recommendations are very useful, and we wish to thank the Assessment Office for their work on this. It has been distributed to faculty for their consideration and input.

On our Faculty Review Day this coming December of 2020, the program director will allot a time during the review presentations to discuss how we might best create rubrics for judging our students work beyond the “high pass” and “low pass” models we use for overall curricular improvements. Because of the qualitative nature of design work, we will need to discuss how best to implement new rubrics.

Students are often working across multiple SLOs on any given design assignment and their grades are based across multiple projects. The qualitative nature of design work makes it more difficult to determine rubrics for whether a simple percentage of students meets all of (or some of) the SLOs for a course. Traditional rubrics for measuring students’ achievement are less straightforward in the BEnvD (especially in terms of specific grades for the class), since a student may meet some SLOs in some projects across the semester, but may have suboptimal
results in others: One example might be a student whose half-semester project final project earns high marks in SLO 1 and 2, but fails to meet expectations in SLO 3 and 4; and then subsequently, their final project might meet SLO 3 and 4, but lack achievement in SLO 1 and 2. Such a student would therefore have to be counted equally (positively and negatively) in these SLO categories of achievement – and one might cancel out the other. The qualitative nature of design project assignments thus substantially complicates traditional percentage-based assessment rubrics, which are based on a student’s demonstration of quantifiable knowledge measured by papers and exams.

Taking these issues into account, following the Faculty Review Day Fall 2020 discussion about Assessment, we propose to create a subcommittee, commencing in Spring 2021, in order to develop potential rubrics that can address the complexity of measuring SLO criteria met in BEnvD student design coursework.

For non-studio classes, we expect that the development of rubrics should be more straightforward. The faculty subcommittee will address these and all courses in consultation with instructors. The program director and subcommittee will plan to meet with the Assessment Center to discuss our proposed strategies for measuring our students’ performance, with the goal to create a more mathematical model of student outcomes across all SLOs.

****

- **Create a more formal mechanism for tracking BEnvD alumni post-graduation.**

In October 2020, shortly before the BEnvD External Review, we created an Alumni Outreach committee in order to track BEnvD graduates. We have found that we already have much of this data, but it can also be supplemented with materials from the Hawaii AIA, who tracks its members. SoA staff will begin to compile current information on our graduates to develop a database. This database will be maintained through our Student Services office. Once we have populated this information, we hope to begin sending out regular mailings to our alumni in order to track their professional development, bring to their attention current SoA events, and to develop better pathways for SoA alumni fundraising.