RE: DRAFT Conversation about AE Cat I Proposal

Miller, Thomas H
Sent: Thursday, March 02, 2017 7:54 AM
To: Liu, Judy
Cc: Miller, Thomas H

OK. Then, let's use this e-mail to document our conversation for use as an attachment to the Cat I proposal. Thanks for being open to the suggestions for improvement.

Tom

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Thomas H. Miller, Ph.D., P.E. (OR)
Associate Professor
School of Civil and Construction Engineering
Oregon State University
Corvallis, OR 97331
(541)737-3322

From: Liu, Judy
Sent: Wednesday, March 1, 2017 11:28 PM
To: Miller, Thomas H <Thomas.Miller@oregonstate.edu>
Subject: RE: DRAFT Conversation about AE Cat I Proposal

Thanks, Tom. I think this summarizes the action items pretty well.
Thank you again for your time and input.
Judy

Judy Liu | **Professor** |
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From: Miller, Thomas H
Sent: Wednesday, March 01, 2017 4:24 PM
To: Liu, Judy
Cc: Miller, Thomas H
Subject: DRAFT Conversation about AE Cat I Proposal

Judy, please see below for my DRAFT responses to you. If they don't reflect our conversation, then we can revise this documentation of our conversation for submittal with the Cat II.

Tom

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Thomas H. Miller, PhD, PE (OR)
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Corvallis, OR 97331
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From: Liu, Judy
Sent: Sunday, February 26, 2017 11:36 AM
To: Miller, Thomas H <Thomas.Miller@oregonstate.edu>

Cc: Weiss, William Jason <Jason.Weiss@oregonstate.edu>
Subject: RE: A review group has sent your proposal back

Tom,
As you know, we received a detailed review from the College committee. Many thanks for the helpful comments – if we could get your insight on how best to address some of the comments, I would greatly appreciate it. I've summarized the comments and responses/questions below. Maybe we can find some time this week to discuss?

Thanks,
Judy

1) Need liaisons to Shane Brown and Janice Nave-Abele in CCE.
Yes, we will request those. Sorry for the oversight – I interpreted 'units' inside OSU as being outside CCE, based on successful degree program proposals in the system.
Thanks. They just need to be brief approvals if no other input from them is suggested.
> Done. Also, Claire Montgomery (Head, Forest Engineering) also added as a liaison.

2) The executive summary (ES) mentions a recent survey of Portland "residents" identifying architectural engineering (AE) as a course of study in great demand. Some documentation or more detailed reference/explanation should be provided.
This was a survey done by the Provost's office at Oregon State University – is a statement as such sufficient, or do we need to try to obtain more details from that office?
Please provide a bit more description of the survey and its results. I am probably confused, but It doesn't seem like "residents" would be surveyed on this topic or provide the kind of informed response we want.
> Obtained additional information about the survey and incorporated into the ES and proposal text.

3) The need for AEs by engineering firms and architectural firms in Portland should also be quantified/documented in the ES and proposal.
We can and should add any more information we find about the Provost's survey (comment 2) to the main body of the proposal, but as noted on page 16 of the proposal:
"The demand for architectural engineers is difficult to assess, because most graduates self-identify by the disciplines (e.g., structural engineering, building mechanical systems) which are often categorized with civil engineering (structural) or mechanical engineering. However, by some sources, the projected job growth for architectural engineers could be as high as 20% for the period between 2012 and 2022[1]."
Meanwhile, a quick search online shows quite a few companies in Portland that identify as "Architecture" and "Engineering" (A/E) firms. I am not sure how to obtain a firm number on that. Do you have suggestions on this?
Suggestions: A list of A/E firms in Portland would be helpful and the number of engineers doing AE work at a large firm or two would also be helpful. ***> A sampling of companies in the region has been included in discussion about the CECOP program. Correspondence with KPFF and Cellar Ridge Construction has also been added.***

4) The approximate number of AE's in Portland currently should be given in the ES and proposal.
Please see response to comment 3 above. We could try to get an idea of a number of A/E firms, but the individual engineers self-identify by their primary discipline (e.g., structural engineering, building mechanical systems)…
Responding to my suggestion above would be sufficient. ***> Also, the number of Architectural Engineering Institute (AEI) members in Oregon was obtained and added to ES and proposal.***

5) Mt Hood CC's technology program is mentioned in the ES and proposal a number of times, but no support letter is provided or description of how students would transition.
As described on page 16 of the proposal, "Mt. Hood Community College has a 2-year architectural engineering technology program that offers some courses such as Sustainable Energy Modeling and Structural Design. The program is not accredited, is limited in course offerings, and does not have the breadth and depth offered by the country's 4 or 5 year AE programs. Mt. Hood's graduates work as architectural engineering technicians who assist engineers, architects and other industry professionals."
Although the Mt. Hood program shows that there is interest in architectural engineering in Oregon, the program is quite different from the one being proposed, serving different needs and types of jobs. That said, yes, Mt. Hood students could transition to OSU through the existing conduit, handled by the advisers. We could add a statement to that effect – would that address this comment?

Documentation of a conversation with MHCC or a letter of support would be very helpful to show that the programs are complementary. ***> Obtained a letter of support from Mike Brayson (MHCC) and added information on how MHCC students could transition to OSU's Architectural Engineering program.***

6) In the executive summary the statement is made that the AE program is intended to attract students not currently enrolled in engineering. This should be explained more fully.

We believe this comment has already been addressed with the rest of that paragraph (in addition to the detail provided in the main body of the proposal), quoted here:

"The Architectural Engineering degree is intended to attract students not currently enrolling in engineering. Specifically, faculty will work on an "effective recruitment pipeline" to accommodate changing demographics, with increasing numbers of women and underrepresented minorities. Faculty will also strive to provide a climate that ensures retention and graduation rates of underrepresented students and women that are on par with those of majority populations in engineering. Architectural Engineering has been known to attract greater percentages of female and underrepresented students than many other engineering disciplines."

Should responses such as the one above be included in the "Comments" box in the CPS for anything that is not revised in the proposal?

A few sentences providing an explanation of what would attract additional students to AE would be helpful. Explain the rationale for them to choose AE versus some non-engineering field.

> Cited literature that states why women who would normally major in architecture might choose AE, for example.

7) In the ES, it states that AE has been known to attract greater percentages of female and under-represented (UR) students than many other engineering disciplines. However, the table in the proposal from Penn State shows AE to be the lowest in UR %.

Good catch – will edit the ES accordingly.

OK. Thanks. Please drop the reference to under-represented students being especially attracted to AE.

> In letter of support from Mike Brayson (MHCC), gained anecdotal evidence about under-represented students.

8) Cooperation with the U of O Architecture program is mentioned a number of times in the proposal, but no letter from them is provided or any discussion of the details of this cooperation. There does not seem to be any U of O faculty involvement in the AE program.

The letter for WS&E was supposed to include information about the collaboration between the College of Forestry, the College of Engineering and the U of O Architecture program, that is already established with the Tall Wood Institute.

If a revised letter from WS&E would not be sufficient, please let us know what would be needed.

There should be a separate letter of support from the architecture program at the U of O.

>Obtained a revised letter from WS&E, and also a letter of support from the Architecture program at the U of O.

9) A CECOP internship program is stated to be available for AE students, but no potential employers are identified.

One of the supporting letters is from members of the IAB who are also CECOP companies. What additional information is needed to demonstrate industry support for the program and the internship program?

Please provide a list of current CECOP firms that might hire AE students and also some additional firms that might be added to the CECOP program.

>Completed this task and added as Table 2.

10) The proposal states that "it would be the goal of the COE and CCE to continue to encourage participation in under-represented groups." No specifics are given on how this would be done, except for women.

We could revise the statement on page 10 of the proposal to be something like "It would be the goal of the COE and CCE to continue to encourage participation of underrepresented groups, through existing mechanisms in the School and the College." Would that address the comment?

Please add in a few sentences to address UR recruiting and retention - can be existing COE programs.

>Contacted Ellen Momsen and added information provided about UR recruiting and retention to the proposal.

11) The anticipated start date of September 15, 2017 is not feasible. Academic Programs Assessment & Accreditation may be able to give a better estimate.

The first 2 years of the program are based on existing pre-Engineering courses, etc., but yes, we would appreciate obtaining a better estimate.

It generally takes about 1.5 years on average for a Cat ! for a new degree program. So, Sept 2018 is probably a better estimate. ***> A note acknowledging this has been added.***

12) It is stated in the proposal that OSU's AE program would be THE program for engineering of sustainable wood-frame buildings, but there is only one required course in wood and one elective. There are other courses in the Wood Science and Engineering Department that may be considered for electives.
The list of electives in Figure 3 are only the approved electives. Students can take other electives – our selection was based on providing somewhat equal distribution of approved electives across the AE disciplines and on what we thought would be the most common electives. Would additional text to this effect address this comment?
Please list some of the other wood-related electives that are available as well.
> A list of other wood-related electives has been added within the proposal.

13) The section on "Ways in which the program will seek to assure quality, access and diversity" should include discussion of ABET accreditation and its impact on quality.
We will add discussion on this.
Thanks.
> Discussion added.

14) The section on Accreditation talks about OSBEELS and the fact that Oregon does not offer the exam for the PE-Architectural, but that an engineer who passed the exam in another state would be considered for licensure in Oregon as a PE especially qualified in Building Systems. This step is critical in having graduates practice in the state of Oregon. Oregon does already have the option to license engineers in Building Systems – this should be made clearer. Has OSBEELS been approached on the possibility of having the exam offered in Oregon once the program is established? In looking on their "Find a Licensee" site, there is no tab for Building Systems, so I was not able to search for that group of engineers. OSBEELS should be asked for the number of those engineers licensed in Oregon. This number should be included in the proposal.
We will state more clearly in the text that the "Building Systems" option already exists. Yes, the question was asked already about the PE-Architectural, but no response was received other than the response about Building Systems. I will ask again and also ask for the number of engineers licensed in Building Systems. If I still do not receive a response, would it be sufficient to summarize our efforts to obtain this information in the proposal?
Please either obtain the number of Building Systems professionals in Oregon or explain that it seems to be zero from the OSBEELS website. I would recommend calling OSBEELS rather than e-mailing them. This shows the void that can be filled.
> Obtained number of professional engineers especially qualified in Building Systems in Oregon and included in text.

15) The role of the capstone course in outcomes assessment needs to be explained in more detail.
Yes, we will explain in more detail.
Thanks. ***> Explanation added.***

16) The table listing the involvement of faculty in the program should include the specific courses taught by each faculty member that relate to the AE program. It should also show the teaching roles of the proposed new AE faculty hires. Currently it seems to be a list of the entire CCE School and includes a faculty member who will be retired (Sillars). There are faculty listed who would not be teaching courses in the AE program.
Dr. Sillars will be removed, proposed new AE faculty hires will be added. AE students could potentially take ANY elective, not just the approved electives or courses in AE topic areas, so that is why we listed certain faculty members as "Teach possible elective course(s)." Should we remove the "possible elective" faculty names? Other suggested revisions?
In the table, please provide courses in the AE program that will be or have been taught by each faculty member.
> The table has been revised to include only those faculty who have recently taught courses on the flowchart.

17) Per OSU Curriculum Council procedures, Cat II proposals for a significant number of the new courses need to be in the Curriculum Proposal System (and past the draft stage) before the Council will approve the Cat I proposal for the new degree program. The Cat I should include a proposed schedule for submission of any of the remaining Cat I proposals.
This did not seem to be the case for the successful Hospitality Management BS degree program proposal that included 15 new courses to be developed without mention of any Cat II proposals? Any insight here would be appreciated.
As we discussed, please see my explanation of the need for the Cat II's above.

> Cat. II proposals have been created for ARE 301, ARE 352, ARE 353, ARE 418, ARE 419, and ARE 451. Anticipated schedule for others included in text.

18) There needs to be an assessment plan in the standard OSU format.

Is this for the course assessment or something related to the Undergraduate Academic Program Review? If for the course assessment, do you know what that is and/or how I could access it? If related to the program review, I don't recall finding a published standard format or seeing that in any of the successful Cat. I proposals that I reviewed? I did use what information I did find, as stated in page 9 as to "A formal review process will follow the OSU Undergraduate Academic Program Review (UAPR) guidelines for review of newly formed programs and for regular reviews every 10 years." Are the 'guidelines' what are required here? Any assistance on this would be appreciated.

As we discussed, please provide a program assessment plan in the OSU format.

> A program assessment plan in the OSU format has been provided.

*****One more issue that I believe needs to be resolved is the availability of the Art 210 History of Western Architecture course and any enrollment restrictions. It is listed as a required course in the AE program and is the only course other than the capstone one that has "architectural content." Is it available each year? Are there sufficient seats for this new major? An e-mail conversation about this with Felix Oliveros (7-5002) would be helpful.**

> Have spoken with Lee Ann Garrison (Director, School of Art & Comm.) about ART 210, and have added her as a liaison.

THANKS FOR YOUR PATIENCE WITH ALL OF MY COMMENTS AND QUESTIONS, JUDY. THIS WILL BE A GREAT ADDITION TO CCE AND THE COE HERE AT OSU.

TOM MILLER

Judy Liu | **Professor** |
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From: Curriculum Proposal System [no-reply@oregonstate.edu]
Sent: Saturday, February 25, 2017 6:45 AM
To: Liu, Judy
Subject: A review group has sent your proposal back

Dear Judy Liu,
Your proposal for **Architectural Engineering** has been sent back by Frank Chaplen with the following comments:
Comments on Cat I Proposal for BS Program in Architectural Engineering
1) Need liaisons to Shane Brown and Janice Nave-Abele in CCE.
2) The executive summary (ES) mentions a recent survey of Portland "residents" identifying architectural engineering (AE) as a course of study in great demand. Some documentation or more detailed reference/explanation should be provided.
3) The need for AEs by engineering firms and architectural firms in Portland should also be quantified/documented in the ES and proposal.
4) The approximate number of AE's in Portland currently should be given in the ES and proposal.
5) Mt Hood CC's technology program is mentioned in the ES and proposal a number of times, but no support letter is provided or description of how students would transition.
6) In the executive summary the statement is made that the AE program is intended to attract students not currently enrolled in engineering. This should be explained more fully.
7) In the ES, it states that AE has been known to attract greater percentages of female and under-represented (UR) students than many other engineering disciplines. However, the table in the proposal from Penn State shows AE to be the lowest in UR %.
8) Cooperation with the U of O Architecture program is mentioned a number of times in the proposal, but no letter from them is provided or any discussion of the details of this cooperation. There does not seem to be any U of O faculty involvement in the AE program.
9) A CECOP internship program is stated to be available for AE students, but no potential employers are

identified.
10) The proposal states that “it would be the goal of the COE and CCE to continue to encourage participation in under-represented groups.” No specifics are given on how this would be done, except for women.
11) The anticipated start date of September 15, 2017 is not feasible. Academic Programs Assessment & Accreditation may be able to give a better estimate.
12) It is stated in the proposal that OSU’s AE program would be THE program for engineering of sustainable wood-frame buildings, but there is only one required course in wood and one elective. There are other courses in the Wood Science and Engineering Department that may be considered for electives.
13) The section on “Ways in which the program will seek to assure quality, access and diversity” should include discussion of ABET accreditation and its impact on quality.
14) The section on Accreditation talks about OSBEELS and the fact that Oregon does not offer the exam for the PE-Architectural, but that an engineer who passed the exam in another state would be considered for licensure in Oregon as a PE especially qualified in Building Systems. This step is critical in having graduates practice in the state of Oregon. Oregon does already have the option to license engineers in Building Systems – this should be made clearer. Has OSBEELS been approached on the possibility of having the exam offered in Oregon once the program is established? In looking on their “Find a Licensee” site, there is no tab for Building Systems, so I was not able to search for that group of engineers. OSBEELS should be asked for the number of those engineers licensed in Oregon. This number should be included in the proposal.
15) The role of the capstone course in outcomes assessment needs to be explained in more detail.
16) The table listing the involvement of faculty in the program should include the specific courses taught by each faculty member that relate to the AE program. It should also show the teaching roles of the proposed new AE faculty hires. Currently it seems to be a list of the entire CCE School and includes a faculty member who will be retired (Sillars). There are faculty listed who would not be teaching courses in the AE program.
17) Per OSU Curriculum Council procedures, Cat II proposals for a significant number of the new courses need to be in the Curriculum Proposal System (and past the draft stage) before the Council will approve the Cat I proposal for the new degree program. The Cat I should include a proposed schedule for submission of any of the remaining Cat I proposals.
18) There needs to be an assessment plan in the standard OSU format.

(comment from Frank Chaplen on February 25, 2017 6:45 am)
Visit the following URL for more information:
https://secure.oregonstate.edu/ap/cps/proposals/view/99017

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