



Oregon

**State Board of Examiners for
Engineering & Land Surveying**

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EXAMINATIONS & QUALIFICATIONS COMMITTEE

Minutes of Meeting

December 13, 2013

Members present:

Steven Burger, Chair

Anne Hillyer

Carl Tappert

Staff present:

Mari Lopez, Executive Secretary

Jenn Gilbert, Executive Assistant

Matt Bryan

Jennifer O'Neill

Joy Pariante

Brianna Weekly

Others present:

Katharine Lozano, Assistant Attorney General

Ken Hoffine (Observer)

The meeting of the Examinations and Qualifications Committee meeting was called to order at 9:33 a.m. in the OSBEELS Conference Room at 670 Hawthorne Avenue SE, Suite 220, Salem, OR 97301.

Public Comment

There was no public comment.

Informational

Notice of Deadlines and Future Changes to NCEES Exams

The Committee reviewed the information provided regarding changes to NCEES examinations.

There was no additional discussion.

Unfinished Business

FE Course Content – NCEES and ABET

The Committee discussed changes to the topics covered on the Fundamentals of Engineering (FE) examination. Based on the results of a survey of professionals, NCEES decided to remove questions related to chemistry, electricity and magnetism and thermodynamics from the examination. The Committee discussed whether or not this would require changes to the

OSBEELS rules regarding required courses for individuals applying for examinations without an ABET-accredited degree. Mr. Burger said he wanted to expand the rule to allow for more acceptable courses covering topics pertaining to specific disciplines, project management or project delivery. Mr. Tappert said the rule should reflect what the candidates are being asked during the examination and more specific courses aren't relevant to every applicant. The Committee determined to further discuss this issue during the February 2014 Committee meeting.

New Business

Results

Breen, Joshua – Oregon State University submitted an affidavit stating that Mr. Breen completed his degree on September 6, 2013. The cutoff for degree completion, as per rule, is September 1. However, Mr. Breen stated that he completed his degree in June 2013, but his request to complete the affidavit regarding meeting the educational requirements per ORS 672.020 had been mixed in with the requests from students completing their degrees via summer courses. Mr. Breen attempted to register to take the FE again, but he was informed that he couldn't since he had passed on his previous attempt. Mr. Breen requested that the Board allow him to enroll as an EIT. OSU has stated it will provide amended proof of Mr. Breen's degree completion prior to the OSBEELS cutoff date. **If official confirmation of his statement is received from OSU prior to the January 2014 Board meeting, the Board may discuss Mr. Breen's request.**

Sachse, Chris O. – Mr. Sachse previously passed the FE examination, but his results were invalidated due to OSBEELS not receiving his transcripts demonstrating degree completion within six months of his examination date. He requested the Board allow his October 2011 results to remain valid. AAG Lozano said that ORS 670.020 requires completion of the degree in six months, but does not require that OSBEELS receive proof of the degree completion within six months. She added that the OAR addressing the transcript receipt requirements at the time was flagged by the Legislative Counsel and was considered invalid.

Mr. Burger said this situation bothers him because previous individuals in the same situation have been sent to test again, regardless of degree completion, if the transcripts were not received. Ms. O'Neill added that Mr. Sachse was difficult to reach because he did not change his address with the Board when he moved. Ms. Gilbert said there is a similar case being reviewed by the Registration Department that was not on the agenda. The Committee recommends the Board approve Mr. Sachse's request to allow his October 2011 results to remain valid. The Committee directed Staff to handle the similar case in the same manner, as required by statute.

Wear, Tristan – Mr. Wear's transcripts were received after the September 1st deadline. Portland State University emailed Staff to explain that the transcripts were received late, due to an error on the school's part. Mr. Wear requested that his FE results remain valid. Due to the delay being outside of Mr. Wear's control, the Committee recommends the Board approve Mr. Wear's request to allow his FE examination results to remain valid.

Mr. Bryan asked the Committee about protocol standards for situations similar to Mr. Wear's and Mr. Sachse's in the future. Mr. Burger said he preferred that each situation continue to be presented to the Committee for review. Ms. Hillyer said, in straightforward situations such as these, Staff should make the determination. Mr. Tappert suggested the more straightforward cases be sent directly to the Board, bypassing the Committee. Ms. Lopez suggested continuing

with the current Committee review process for continuity. The Committee determined to continue reviewing situations such as this on a case-by-case basis.

Question Form

Rytkonen, Franklin – Mr. Rytkonen requested that the Board consider amending OAR 820-010-0219 to allow graduate students in their final year of graduate school to sit for the exam if they are within 10 months of graduation if they provide proof of completion for the additional engineering technical coursework required along with their application. AAG Lozano it would be unlawful for the Board to make this change, as it exceeds the authority of the enabling statute. After discussion, the Committee recommends the Board deny Mr. Rytkonen’s request to amend OAR 820-010-0219.

CBT

Email from Jerry Carter dated November 7, 2013 – The Committee noted that this issue was also discussed during the Rules and Regulations Committee (RRC) meeting. The RRC determined that a temporary rule would be reviewed at the Special Board Meeting in the afternoon to remove the application windows, as application and examination within the same window can’t be enforced. Mr. Tappert recommended notifying all approved applicants of the 12-month window of examination. AAG Lozano recommended the Committee consider statutory changes to alleviate the burden placed on Staff by continuous NCEES examination changes. She explained that OSBEELS can change their statute to only allow for registration by 1st Registration or Comity. She recommended considering this concept prior to the next Legislative Session. Mr. Bryan reported the current application and examination scheduling statistics to the Committee. Currently, 67 FE applications and one FLS application have been approved. Of those, 15 individuals have scheduled their FE examination and one individual has scheduled the FLS examination. Mr. Bryan explained that scheduling ability varies between Pearson Vue locations, as seats are limited. Individuals attempting to schedule the FE or FLS are competing with other individuals who are attempting to take one of the nearly 1,000 examinations offered through Pearson Vue.

Evaluations of military experience and education

The Committee discussed accepting applicable military experience and education when considering applicants for registration. Ms. Pariante explained that service members can access their Joint Service Transcript (JST) which translates military experience and education into college credit equivalency recommendations. This program is through the American Council on Education (ACE) and courses are evaluated in a manner similar to the ABET accreditation process. According to ORS 672.105, “an applicant qualifies for the fundamentals in engineering examination if the board determines that the applicant has military training or experience that is substantially equivalent to the education required by subsection (1) of this section.” AAG Lozano said, since military experience and education are already addressed in statute, OSBEELS can change its rules to include consideration of JSTs from ACE.

After discussion, **the Committee recommends the Board review the rule at the January Board meeting to ensure compliance with statute and that the Board allows Staff to make determinations based on the amended rule.** Ms. Lopez pointed out that all military experience or education situations will still need to be reviewed by the Committee, in the same manner as all other long-form applications.

Review of Applications

Comity Applications

Bannister, John – The Committee reviewed an application for registration as a professional civil engineer by comity. Mr. Bannister submitted an official transcript from the University of Alaska – Fairbanks demonstrating both of his Master of Science degrees in Civil Engineering and Statistics. Neither of these degrees meet the coursework requirements outlined in OAR 820-010-0225(3)(d). He also submitted official transcripts from Reed College demonstrating his Bachelor of Arts in Physics and from Oregon State University demonstrating completed coursework. His transcript from the University of Alaska – Fairbanks demonstrates that he completed an applied multivariable statistics course. His transcript from Reed College demonstrates that he completed a General Physics I course and his transcript from OSU demonstrates that he completed a Strength of Materials course. Mr. Burger noted that he identified six of the nine required courses in Mr. Bannister’s transcripts. He explained that Classical Mechanics 1 and 2 are equivalent to a course in Statics and Dynamics. He said some courses are named differently between colleges. Mr. Tappert also noted a course equivalent to Thermodynamics. Mr. Burger asked if Applied Numerical Analysis can be used to fulfill OSBEELS coursework requirements. Mr. Bryan explained that if a course isn’t specifically noted as one of the nine requirements in rule, Staff can’t use it toward an applicant’s eligibility. After discussion, the Committee recommends the Board approve Mr. Bannister’s application for registration as a civil engineer by comity.

Boys, Mark W. – Mr. Boys submitted an application for registration as an electrical engineer by comity. Mr. Boys’ official verification from the State of Colorado Division of Registrations – Professional Engineers and Professional Land Surveyors (Colorado Board) indicates that he passed a Colorado state-specific FE examination in October 1980. At that time, OSBEELS administered the NCEES FE examination. The Colorado Board is unable to provide information regarding the content of their October 1980 FE examination. Staff was unable to determine if the Colorado Board’s FE examination was substantially equivalent to the NCEES FE examination at the time, as required per ORS 672.148(1)(d).

The Committee discussed the process of determining substantial equivalency. It was noted that with the continuing changes due to CBT, it will be difficult to determine substantial equivalency in the future. AAG Lozano recommended reviewing substantial equivalency requirements for comity applicants. After discussion, the Committee recommends the Board approve Mr. Boys’ application for registration as an electrical engineer by comity.

Walther, Andrew T. – Mr. Walther submitted an application for registration as an electrical engineer by comity. Mr. Walther has provided an official verification from the Wisconsin State Board verifying his successful passage of the NCEES 8-hour PE architectural examination. In accordance with OAR 820-010-0230, OSBEELS does not offer the architectural engineering discipline. Mr. Walther’s NCEES record demonstrates 4+ years of electrical engineering experience in accordance with OAR 820-010-0230.

Mr. Tappert asked about Mr. Walther’s educational background. Ms. O’Neill said he holds an ABET-accredited degree in architectural engineering. Mr. Tappert said, typically, engineering disciplines not offered by OSBEELS falls under the umbrella of civil engineering when not substantially equivalent to an offered discipline. However, Mr. Tappert noted that OSBEELS can’t license an individual in a field they haven’t been educated in or tested on. Ms. Gilbert

pointed out that review of PE applicants take experience in a desired discipline into account when determining examination eligibility. AAG Lozano said the statute only requires those considerations for the PE overall, but it doesn't specify discipline-specific substantial equivalency requirements.

Based on this information, Mr. Tappert said Mr. Walther would have been approved to sit for the PE electrical examination, but the issue is that he didn't actually take that examination – he took the architectural engineering examination.

The Committee reviewed the syllabus for the NCEES architectural engineering examination to determine which discipline offered by OSBEELS is the most similar. The syllabus reflected equal parts structural, mechanical and electrical engineering. With this additional information, Mr. Tappert said he feels like Mr. Walther would be qualified for any of those three disciplines. Ms. Hillyer and Mr. Burger agreed. Mr. Burger asked about Mr. Walther's experience history and recommendations and he was informed that they were all submitted and complete. He suggested that the focus should be on references in situations such as this to assist in determining competency in the requested discipline. After discussion, the Committee recommends the Board approve Mr. Walther's application for registration as an electrical engineer by comity.

1st Registration Applications

Mochida, Toshihiko – Mr. Mochida submitted an application for registration as a mechanical engineer by 1st Registration. Three years and one month of Mr. Mochida's engineering experience gained is verified by his PE references and 13 years and 11 months are verified by non-registered references. He does not have a supervisory PE reference who can verify the remaining 11 months of engineering experience required to meet OAR 820-010-0230(1)(a). Mr. Mochida requested a waiver of the requirements outlined in OAR 820-010-0204(2)(b)(A) and OAR 820-010-0230(1)(a). After discussion, the Committee recommends the Board approve Mr. Mochida's waiver request.

Rao, Somyajula S. – Mr. Rao submitted an application for registration as a chemical engineer by 1st Registration. Three years and eight months of Mr. Rao's engineering experience gained is verified by his PE references and one year and two months are verified by non-registered references. Mr. Rao does not have a supervisory PE reference who can verify the remaining four months of his engineering experience to meet OAR 820-010-0230(1)(a). Mr. Rao requested a waiver of the requirements outlined in OAR 820-010-0204(2)(b)(A) and OAR 820-010-0230(1)(a). The Committee asked why Mr. Rao did not have a registered reference for the one year and two month time period. Staff explained that he was working under a freelance consultant during that time period. Staff added that none of his work experience in India could be verified and there was no PE on staff. The Committee determined that Mr. Rao should reapply after completing the additional four months of experience required. After discussion, the Committee recommends the Board deny Mr. Rao's waiver request.

Yang, Minyeong – Mr. Yang submitted an application for registration as a civil engineer by 1st Registration. Mr. Yang has provided an NCEES Credentials Evaluation of his degree from Chungnam National University, but it is deficient in 23 semester credit hours in math/basic science and 12 semester credit hours in engineering sciences and design. Seven years and three months of Mr. Yang's engineering experience is verified by his PE references and one year and six months are verified by non-registered references. Mr. Yang requested a waiver of the

educational or experience requirements. Mr. Burger noted that he could not find six of the nine required courses in Mr. Yang's transcripts. AAG Lozano pointed out that Mr. Yang would then be required to demonstrate 12 years of experience. Mr. Tappert said Mr. Yang could also complete the missing courses to meet the educational requirements. Mr. Burger noted that Mr. Yang's degree is missing far more than a few general studies classes. Mr. Tappert agreed and said the degree is missing nearly a year of general education courses. After discussion, the Committee recommends the Board deny Mr. Yang's waiver request.

Examination Applications

Paul, Andrew A. – Mr. Paul submitted an application for the NCEES Fundamentals of Land Surveying examination. With his application, Mr. Paul also submitted an official transcript from the Oregon Institute of Technology demonstrating his Bachelor of Science degree in Civil Engineering. This degree doesn't meet the coursework requirements outlined in OAR 820-010-0226(3)(d). The Committee discussed the applicability of the following courses to the land surveying requirements outlined in OAR 820-010-0226(3)(d):

- Computer Aided Drafting
- Plane Surveying I
- Introduction to Transportation Engineering
- Civil Engineering Project I
- Civil Design Software Applications
- Environmental River Mechanics

Mr. Tappert asked if Mr. Paul was short on 11 semester hours overall, or if he was just missing the required surveying ethics course. AAG Lozano said the rule specifically states that he must have the designated coursework **and** the surveying ethics course. Mr. Burger said he wasn't sure about accepting the Transportation Engineering and River Mechanics courses as "surveying instruction." AAG Lozano pointed out that just because a course is part of the land surveying degree program does not mean it is a course that qualifies as "surveying instruction," as per the rule. After discussion, the Committee recommends the Board deny Mr. Paul's application based on non-compliance with OAR 820-010-0226(3)(d).

Porter, Tyler S. – Mr. Porter submitted an application to take the Fundamentals of Land Surveying examination based on a combination of education and experience. Mr. Porter has provided three references registered in an NCEES jurisdiction who verify six year and one month of his land surveying experience. Additionally, Mr. Porter provided official transcripts demonstrating his coursework completed. However, these transcripts do not explicitly demonstrate completion of coursework pursuant to OAR 820-010-0228. The Committee determined that 10 quarter hours of coursework was applicable toward the land surveying requirements. Mr. Tappert pointed out that it appears Mr. Porter has only taken three surveying courses, at most. Similar to Mr. Paul's situation, the Committee upheld that courses that are part of a surveying degree program aren't necessarily considered to be "surveying instruction." Additionally, Ms. Hillyer pointed out that one reference identified Mr. Porter as "Gus," which is not a name listed anywhere on his application. Ms. O'Neill said that particular reference would bring Mr. Porter's verified experience time to eight years, but the reference was not registered for the entire time he's attempting to verify.

Mr. Tappert noted that much of Mr. Porter's experience was gained at one location, but the Committee is unsure of the experience referenced prior to that point. After discussion, the

Committee recommends the Board deny Mr. Porter's application based on lack of registered references verifying experience.

Reapplication

Applauso, Jeannette M. – Ms. Applauso applied for the civil PE examination. She has applied for this examination three times and has failed the examination twice. It has been four years since her last attempt at the examination and she has not been reviewed by the Committee in the past. Since her last attempt, Ms. Applauso has been engaged in self-study in preparation for the examination, in accordance with OAR 820-010-0465(1). After discussion, the Committee recommends the Board approve Ms. Applauso's reapplication for the civil PE examination.

The meeting adjourned at 11:15 a.m.