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Higher Education Coordinating Commission
The State of Oregon
255 Capitol Street NE, Third Floor
Salem, OR 97310

Re: Proposed Architectural Engineering Program
Oregon State University

Dear Commission Members:

Developing an architectural engineering program at Oregon State University is wonderful news to the building industry. The Oregon State program will be only the second program offered in the U.S. west of the Rockies and the only program in the Pacific Northwest. This is indeed welcoming news to an industry with a strong demand for new talents. As the Past-president of Architectural Engineering Institute (AEI), I wholeheartedly endorse the proposal of the excellent program from the School of Civil and Construction Engineering at OSU.

ABET, the accreditation organization for engineering programs in the United States list only 20 U.S. Schools offering a program in architectural engineering. Architectural Engineering differs from architecture in that architectural engineering focuses on the technical aspects of the design and construction of buildings. Registered Architectural Engineers (AE) achieve competency in specific technical areas of the industry. ABET classify these specialties as: structural, mechanical, electrical, and construction. The National Council of Examiners for Engineering and Surveying (NCEES) has established a discipline-specific exam in Architectural Engineering.

Architectural Engineering Institute champions “integrated building solutions”. Traditionally, the process of designing buildings began with an architect establishing the initial design. Consulting engineers were hired to “engineer” the supporting elements. The creation of contemporary buildings relies on team efforts. Integration of all design expertise is necessary. The goal of AE programs is to graduate leaders for this integrative process. In addition to expertise in their unique discipline specialty, AE graduates are expected to be “building integrators”.

Commercial and residential buildings accounts for 40% of the total energy use in the U.S. in 2015, according to U.S. Energy Information Administration. While energy conservation measures are extensively investigated by many disciplines in the building sector, research opportunities for energy conservation within the domain of integrated building solutions awaits more intense exploration.

According to U.S. Department of Commerce, in 2015, the gross output of the construction industry reached 1.35 USD Trillion or 4.3% of the GDP. With only 20 universities offering AE programs, the demands for AE graduates is extremely strong. Reports of 100% placement at graduation are not uncommon. At the 2016 annual Penn State Architectural Engineering Department Career Fair, 135 firms attended to recruit approximately 90 graduates. The venue was unable to hosts another 70 additional firms. These companies resorted to scheduling presentations and appointments at a later time. This level of demand translates to over 2 companies per graduate. Many of these companies have multiple positions to fill.

The proposed architectural engineering program at OSU is well researched and organized. Having paid meticulous detail to accreditation criteria, professional registration requirements, and assessment methodologies, it can be considered a model 4-year program. In particular, the courses devoted to synthesis, design studio, and capstone project provides the strong foundation for the B.S. graduates to succeed as future leaders in a profession where system and team integration are gaining much momentum.

The proposed architectural engineering program at Oregon State University will undoubtedly attract students with building design interests, strong mathematical and science background, and the innate desire to impact the global village in a technically, socially, and environmentally responsible and sustainable manner.

I would like to extend my congratulations and endorsement to the faculty at the School of Civil and Construction Engineering for the vision and commitment towards the development of this much needed program in northwestern region of the United State.

All the best,

Moses D. F. Ling, PE RA
Associate Professor and Undergraduate Program Officer
The Department of Architectural Engineering
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Past-president of the Board of Governors
Architectural Engineering Institute, ASCE