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February 7, 2019

To: Michael Bragg, Dean, College of Engineering

From: Rebecca Aanerud, Interim Vice Provost and Dean
Kima Cargill, Interim Associate Dean for Academic Affairs and Planning

Rebecca Aanerud
Kima Cargill, Ph.D.

RE: Review of the Department of Industrial and Systems Engineering (2018-2019)

This memorandum outlines the Graduate School's final recommendations from the Department of Industrial and Systems Engineering academic program review. Detailed comments on the review can be found in the documents that were part of the following formal review proceedings:

- Charge meeting between review committee and administrators (May 25, 2018)
- Self-Study (September 4, 2018)
- Site visit (October 15-16, 2018)
- Review committee report (October 16, 2018)
- Industrial and Systems Engineering response to the report (December 1, 2018)
- Graduate School Council consideration of review (February 7, 2019)

The review committee consisted of:

Daniel Kirschen, Professor, UW Department of Electrical Engineering (Committee Chair)

Mehmet Sarikaya, Professor, UW Department of Materials Science and Engineering

Rakesh Nagi, Professor and Department Head, Industrial and Enterprise Systems Engineering, University of Illinois at Urbana-Champaign

Abhi Deshmukh, Professor and Department Head, Department of Industrial Engineering

Members of the Graduate School Council presented findings and recommendations to the full Council at its meeting on February 7, 2019. A summary of this report, composed by Graduate School Council Members, is attached to this document.

Graduate School Council Recommendations

The Graduate School Council commends the Department of Industrial and Systems Engineering on the strength of its programs, faculty, and students. After discussion, the Council recommended the following:

- Full academic program review in 10 years (2028-2029)

We concur with the Council's recommendations.

cc: Mark Richards, Provost and Executive Vice President
Patricia Moy, Associate Vice Provost for Academic and Student Affairs, Office of the Provost
Linda Ng Boyle, Professor and Chair, Department of Industrial and Systems Engineering
Becky Corriell, Director, Academic Affairs & Planning, the Graduate School
Academic unit Review Committee Members
Members of the Graduate School Council
GPSS President

Attachment

University of Washington | Graduate Council

Summary of the review of the Department of Industrial and Systems Engineering

Academic Unit Name: Industrial & Systems Engineering, College of Engineering

Degrees/Certificates Included in the Review:

- Bachelor of Science in Industrial Engineering
- Master of Science in Industrial Engineering
- Master of Industrial & Systems Engineering (fee-based)
- Doctor of Philosophy in Industrial Engineering
- Graduate Certificate in Global Integrated Systems Engineering
- Graduate Certificate in Engineering Leadership

Program Strengths:

1. The leadership of the Department is both strong and dedicated, fully leveraging its resource base and industry-rich Executive Advisory Board to execute a strategy with clear focus. The Department meets regularly (monthly) in accord with a clear governance process.
2. The Department recruits strong junior faculty and invests in their future; junior faculty receive startup packages when they join the group and receive regular, continuous mentoring and support.
3. Student quality is strong across both undergraduate and graduate programs, and the quality of the development experience afforded them helps them land strong positions with leading employers.

Challenges and Risks:

1. Available spaces are limited, of poor quality, unattractive, and potentially unsafe.
2. The Department is small relative to its aspirational peers both in terms of faculty size and number of students, and discretionary resources through endowment and otherwise are limited.

Areas of Concurrence/Disagreement:

1. The Department and Review Committee exhibit broad general agreement across most program strengths and challenges, particularly in the areas of physical space, faculty size, and funding.
2. With respect to the Review Committee's recommendations, the Department agrees to:
 - a. Establish a strategic plan for long-term hiring, space, and greater industry collaboration following the naming of the new dean of the College of Engineering;
 - b. Share the strategic plan with staff, to provide more budget transparency to faculty; andContinue its foci in healthcare and data science; the Department is planning to offer a Data Science option to undergraduates and will do so for graduate students in the near future.
3. The Department disagrees with the Review Committee's recommendations to delegate the undergraduate coordinator role to someone other than the Chair, to increase investment in marketing and communications (though they plan to maintain it), and to focus on multi-scale manufacturing.

4. The Review Committee also made a number of observations and suggestions in response to the Unit-Defined Questions, questions which were positioned as items on which the Department was seeking advice from the Review Committee. Several of the recommendations related to Unit-Defined Questions were mentioned by the Review Committee in the exit meeting and were warmly received, and most align well with the Department's own ideas in its Self Study and/or present no obvious conflicts. The Department did not explicitly respond to the observations and suggestions in its written response; informally, Department leadership has communicated that it is grateful for the perspective and will incorporate the observations and suggestions into its own decision calculus moving forward.

Graduate School Council Recommendations:

The Graduate School Council recommends continuing status for all UW Industrial & Systems Engineering degree programs with next review taking place in 10 years