



2007 Engineering Education Task Force Report

Education Committee, April 10, 2008

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Charge

Assess the current and projected supply and demand of engineering graduates in the state in the various disciplines of engineering.

Develop recommendations to ensure that the state's education needs in engineering are effectively and efficiently met.



Task Force Members

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- Bob Meyer, Stout
- Ronald Perez, Milwaukee
- Gerry Ring, Stevens Point
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Background

Campuses offering engineering programs in Wisconsin:

- UWS
 - UW-Madison
 - UW-Platteville
 - UW-Milwaukee.
 - UW-Stout- manufacturing engineering
 - UW-Stevens Point- paper science.

- Private Institutions
 - Milwaukee School of Engineering
 - Marquette



Capacity

- Enrollment and graduation rates have been steady for the past 10 years.
- Most programs have an appropriate margin of capacity to accommodate cyclical nature of demand.
- Areas of future capacity building may exist in some emerging subfields.



Demand

No evidence of unmet demand for engineers in the state or in a particular region.



Recruitment and Retention

As the numbers of high school graduates in Wisconsin decline,

the needs of part-time students, women, and students of color become paramount.

Women and students of color are underrepresented in UW System engineering programs

Correlated with the low number of engineering faculty from these populations



Key Recommendations

1. Periodically assess regional and state wide demand for engineering graduates.
2. Utilize existing resources to the extent possible to meet potential unmet regional need.



To the extent that there is unmet regional demand...

Serve through collaborative offsite delivery of existing programs where possible, e.g., UW-Platteville programs in the Fox Valley and Rock County.

Develop new engineering programs only when the long-term sustainability of collaborative offsite programs is demonstrated.



Develop strategies for accommodating part-time and place-bound students in existing engineering programs because

Engineering programs are not distributed equally across the state

Part-time and place-bound students are likely to stay in Wisconsin



Students of Color and Women

Develop strategies for attracting and retaining more students in general, and women and students of color in particular.

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Pipeline

Work with K-12 and pre-college programs to nurture interest and ensure appropriate preparation of students



Periodically Assess Capacity and Demand

- Study potential regional unmet demand.
- Safeguard excellence in teaching and research both in existing and in new engineering programs.



Questions and Discussion