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CISE Curriculum Issues  
Industrial Advisory Board Meeting  
April 22-23, 1998

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*The CISE Industrial Advisory Board ... experts in the performance of our graduates.*

For discussion:

- Computer Engineering: curriculum and outcomes
- 5 questions for discussion

For your reference:

- these slides
- CISE Computer Engineering Program - Summary for the IAB
- Survey

## Computer Engineering: curriculum

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- **Computer engineering core:** (49 credits). Topics include intro to computer science, discrete mathematics, data structures and algorithms, computer architecture and digital logic, software engineering, operating systems, electrical circuits, signals & systems, microprocessors, numerical analysis, networks, ethics, and a senior design project.
- **Technical electives:** (18 credits). Primarily computer science and engineering, and electrical engineering courses.
- **College of Engineering core:** (5 or 6 credits). Thermodynamics, statics, and materials.
- **Math and statistics:** (21 credits). Calculus, differential equations, statistics, and linear algebra.
- **Sciences:** (15 credits). Physics, chemistry, and/or biology.
- **General education:** (18 credits). Social sciences, humanities, and technical writing.

## Computer Engineering: desired outcomes

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- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

## Five questions

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Considering the performance of our grads, specific to each area of the curriculum and each outcome:

1. What areas can be improved?
2. What are our grads' strengths?
3. What areas are most/least important to your company?
4. What additional experiences do you value?
5. What on-the-job training do you provide?