Courses reviewed at the meeting of May 3, 2012

**Course Proposals**

All courses were approved except BMI/Statistics 768, which was approved conditionally.

1. **Biostatistics and Medical Informatics/Statistics 768**: Statistical Methods for Medical Image Analysis  
   *Type of proposal: New course*  
   *Action: Conditional approval pending receipt of a letter from the Department of Medical Physics*

2. **Computer Sciences 402**: Introducing Computer Science to K-12 Students  
   *Type of proposal: New course*

3. **Electrical and Computer Engineering 170**: Introductory Laboratory  
   *Type of proposal: Course deletion*

4. **Electrical and Computer Engineering 220**: Electrodynamics I  
   *Type of proposal: Change in course prerequisites*  
   *Current: Prerequisites > Physics 202, Math 234; ECE 230 or con req*  
   *Proposed: Prerequisites > Physics 202, ECE 219; ECE 230 or con req*

5. **Electrical and Computer Engineering 330**: Signals and Systems  
   *Type of proposal: Change in course prerequisites*  
   *Current: Prerequisites > ECE 230 or equiv*  
   *Proposed: Prerequisites > ECE 203; ECE 230 or equiv.*

6. **Electrical and Computer Engineering 445**: Semiconductor Physics and Devices  
   *Type of proposal: Change in course description*  
   *Current: Band model and carrier transport in semiconductors, excess carriers, p-n junctions, contacts and surfaces, physics of devices including bipolar and field-effect transistors, diodes, photodevices, SCR’s, thin film structures.*  
   *Proposed: Physics and properties of semiconductors, p-n junctions, metal-semiconductor contacts, homojunction and heterojunction bipolar transistor and physics, metal-oxide-semiconductor and heterostructure field-effect transistor and physics, thin-film resistors, memory devices, quantum devices.*

7. **Electrical and Computer Engineering 537**: Communication Networks  
   *Type of proposal: Change in course description, prerequisites*  
   *Current: Description > Study of communication networks. Layered network architecture. Queueing theory; Little’s theorem, M/M/, and M/G/1 queues, Jackson networks. Data*

Proposed: Description > Study of communication networks with focus on performance analysis. Layered network structure. Basic protocol functions such as addressing, multiplexing, routing, forwarding, flow control, error control, and congestion response. Overview of transport, network, and link layer protocol standards. Introduction to wireless and mobile networks. Prerequisites > ECE 203, CS 367

8. Electrical and Computer Engineering 554: Digital Engineering Laboratory
   Type of proposal: Change in course description, prerequisites
   Current: Description > Practical aspects of computer system design. Design, construction, and testing of significant digital subsystems. Design, construction, microprogramming, and programming of bit-slice implemented digital computers. Prerequisites > ECE 351; ECE/Comp Sci 552.

   Type of proposal: Change in credits
   Current: 3
   Proposed: 4

10. Engineering Professional Development 643: Analysis of Trends in Engines – Legislative Drivers and Alternative Fuels
    Type of proposal: New Course

11. Engineering Professional Development 644: Analysis of Trends in Engines – Powertrain Technologies and Manufacturing Constraints
    Type of proposal: New course

12. Engineering Professional Development 660: Core Competencies of Sustainability
    Type of proposal: New course

    Type of proposal: New course
14. **Geography/Atmospheric and Oceanic Sciences/Environmental Studies 332**: The Global Warming Debate  
*Type of proposal: Change in title, course description*  
*Current:* The Global Warming Debate. Description > The global warming debate is shifting from whether warming is occurring and why top assessing consequences and policy options. Course reviews milestones in climate-change science, current state of knowledge, climate-change risks, and adaptation/mitigation strategies.  
*Proposed:* Global Warming: Science and Impacts. Description > Climate change is underway and will continue into the foreseeable future. This course offers a fundamental understanding of how and why global warming is happening, and what to expect in the future. Together, we will investigate and discuss the evidence for change, the science that explains these observations, predicted impacts on humans and ecosystems, and the societal debate over proposed solutions.

15. **Geoscience 360**: Principles of Mineralogy  
*Type of proposal: Change in crosslist status*  
*Current:* none  
*Proposed:* Add Geological Engineering

16. **Geoscience 370**: Elementary Petrology  
*Type of proposal: Change in crosslist status*  
*Current:* none  
*Proposed:* Add Geological Engineering

17. **Geoscience 431**: Sedimentary & Stratigraphy Lab  
*Type of proposal: Change in crosslist status*  
*Current:* none  
*Proposed:* Add Geological Engineering

18. **Geoscience 455**: Structural Geology  
*Type of proposal: Change in crosslist status*  
*Current:* none  
*Proposed:* Add Geological Engineering

19. **Geoscience 724**: Groundwater Flow Modeling  
*Type of proposal: Change in course description, crosslist status*  
*Current:* Description > An introduction to the principles of modeling groundwater flow systems, with emphasis on regional flow system analysis. The use of finite difference technique is stressed. Students are introduced to packaged models developed by the U.S. Geological Survey and Illinois State Water Survey. No crosslist.
Proposed: Description > An introduction to the principles of modeling groundwater flow systems, with emphasis on regional flow system analysis. Conceptual understanding of governing equations, and the use of finite difference techniques to solve such equations are stressed. Students develop their own codes and are introduced to packaged models, including those developed by the U.S. Geological Survey. Add Geological Engineering as crosslist.

   Type of proposal: Course deletion

21. Materials Science and Engineering 390: Materials Systems and Design Project II
   Type of proposal: Course deletion