

**UNIVERSITY OF RHODE ISLAND**  
**The Graduate School**  
**CURRICULAR REPORT FROM THE GRADUATE COUNCIL TO THE FACULTY**  
**SENATE: REPORT NO. 2007-2008-4**  
As amended by the Faculty Senate on February 21, 2008

At meeting No. 424 held February 1, 2008, the Graduate Council considered and approved the following curricular matters which are now submitted to the Faculty Senate for information or confirmation as indicated.

**I. Matters of Information**

A. College of Engineering

1. Department of Civil and Environmental Engineering  
Changes:

**CVE 549 Nonbituminous Transportation Materials & Mix Design** – change in title and catalog description to read:

**CVE 549 Transportation Soils and Materials**

Surficial and subgrade soils, mineral aggregates, Portland Cement Concretes, mix-design methods, material characterization and testing, fracture, fatigue, and modern transportation materials.

2. Department of Industrial and Systems Engineering  
Changes:

**IME 500 Network Application in Industrial Engineering** – change in course number, title, prerequisite and catalog description to read:

**ISE 500 Project Planning and Management in Systems Engineering (3)**

Presents the tools and processes to help plan and manage real-world systems engineering projects including network planning, scheduling, analysis, synthesis; critical path method/PERT; computer-aided planning; and other contemporary tools. Pre: 432 or permission of instructor.

**IME513 or (STA 513) Quality Engineering** – change in course number, title and prerequisite to read:

**ISE 513 or (STA 513) Quality Systems**

Pre: 411 or equivalent.

**IME 525 (or CSC 525 or ELE 515)** – change in course number and prerequisite to read:

**ISE 525 (or CSC 525 or ELE 515)**

Pre: CSC 212 or ISE 325, ISE 433 or ELE 509, or permission of instructor.

**IME 533 Advanced Statistical Methods for Research and Industry** – change in course number to read:

**ISE 533 Advanced Statistical Methods for Research and Industry**

**IME 540 Production Control and Inventory Systems** – change in course number to read:

**ISE 540 Production Control and Inventory Systems**

**IME 541 Advanced Materials Processing** – change in course number to read:

**ISE 541 Advanced Materials Processing**

**IME 542 Introduction to Computer-Aided Manufacturing** – change in course number, title and catalog description to read:

**ISE 542 Computer-aided Manufacturing Systems (3)**

Use of computers in manufacturing systems. Solid modeling principles and applications. Numerical and adaptive control. CNC programming. Introduction to rapid manufacturing.

**IME 543 Fundamentals of Machining** – change in course number and prerequisite to read:

**ISE 543 Fundamentals of Machining**

Pre: CVE 220 and ISE 240 or 340 or permission of instructor.

**IME 544 Automatic Assembly** – change in course number and title to read:

**ISE 544 Automatic Assembly Systems**

**IME 545 Manufacturing Systems: Analysis, Design, Simulation** – change in course number and catalog description to read:

**ISE 545 Manufacturing Systems: Analysis, Design, Simulation (3)**

Problems in system analysis and design as related to modern manufacturing systems. Quantitative models and simulation methods for manufacturing planning, control scheduling, flexible manufacturing and highly automated manufacturing systems.

**IME 546 Advanced Metal Deformation Processes** – change in course number and prerequisite to read:

**ISE 546 Advanced Metal Deformation Processes**

Pre: 240 or 340 or permission of instructor.

**IME 549 (or MCE 549) Advanced Product Design for Manufacture** – change in course number to read:

**ISE 549 (or MCE 549) Advanced Product Design for Manufacture**

**IME 550 Design for Producibility** – change in course number to read:

**ISE 550 Design for Producibility**

**IME 552 Lean Systems** - change in course number, prerequisite, and catalog description to read:

**ISE 552 Lean Systems (3)**

Advanced study of enterprise systems design including application of lean principles to service industries. Specific topics include lean manufacturing, waste elimination, reduction of cycle and set up times, reconfigurable systems, quality and performance analysis. Pre: 451 or 540 or permission of instructor.

**IME 555 Deterministic Systems Optimization** – change in course number, title and prerequisite to read:

**ISE 555 Optimization of Deterministic Systems (3)**

Pre: ISE 432 or permission of instructor.

**IME 591 Special Problems** – change in course number to read:

**ISE 591 Special Problems**

**IME 592 Special Problems** – change in course number to read:

**ISE 592 Special Problems**

**IME 599 Master's Thesis Research** - change in course number to read:  
**ISE 599 Master's Thesis Research**

**IME 634 Design and Analysis of Industrial Experiments** - change in course number and title to read:  
**ISE 634 Design and Analysis of Experiments**

**IME 660 Nonlinear Optimization** - change in course number, title and prerequisite to read:  
**ISE 660 Nonlinear Systems Optimization**  
Pre: 432 or permission of instructor.

**IME 691 Advanced Special Problems in Industrial Engineering** - change in course number to read:  
**ISE 691 Advanced Special Problems in Industrial Engineering**

**IME 692 Advanced Special Problems in Industrial Engineering** - change in course number to read:  
**ISE 692 Advanced Special Problems in Industrial Engineering**

**IME 699 Doctoral Dissertation Research** – change in course number to read:  
**ISE 699 Doctoral Dissertation Research**

B. College of Environmental and Life Sciences

1. Department of Biological Sciences

Changes:

**BIO 546 Introduction to Neurobiology** – change in credits and prerequisite to read:

**BIO 546 Introduction to Neurobiology (3)**

(Lec. 3) Pre: BIO 201 and MTH 141 or permission of instructor.

C. College of Human Science and Services

1. Department of Physical Therapy

Changes:

**PHT 575 Physical Internship I** – change in grading method from A-F to S/U.

**PHT 585 Physical Internship II** – change in grading method from A-F to S/U

**PHT 595 Physical Internship III** – change in grading method from A-F to S/U

2. Department of Human Development and Family Studies

Changes:

**HDF 540 Interdisciplinary Teamwork in Health & Human Services** – change in prerequisite to read:

**HDF 540 Interdisciplinary Teamwork in Health & Human Services**

Pre: Permission of instructor.

## II. Matters Requiring Confirmation by Faculty Senate

### A. College of Engineering

#### 1. Department of Industrial and Systems Engineering

##### Changes:

Change in names and requirements for MS in Manufacturing Systems Engineering and PhD in Industrial and Manufacturing Systems Engineering to read:

#### **Master of Science in Systems Engineering**

**Admission requirements:** B.S. degree in engineering, mathematics, physics, chemistry, computer science, or management science. Applicants may be required to take courses that are prerequisites to specific courses required for completion of the program. Prerequisite course credits might not be counted as program credits. GRE required for graduates of non-U.S. universities except under specific university partnership agreement.

**Program requirements:** thesis or non-thesis option – minimum of 30 credits with at least 15 credits in graduate-level industrial and systems engineering courses including ISE 533, 555 and three courses in one of the specialization areas. For the thesis option, the thesis counts as six to nine credits. The non-thesis option is available to part-time students, or in exceptional circumstances, to students with permission from the graduate studies committee. For the non-thesis option, a comprehensive examination and one course involving significant independent research and a term paper are required.

#### **Doctor of Philosophy in Industrial Systems Engineering**

**Admission requirements:** M.S. degree in engineering, mathematics, physics, chemistry, computer science, or management science. Applicants may be required to take courses that are prerequisites to specific courses required for completion of the program. Prerequisite course credits might not be counted as program credits. Although a person with a bachelor's degree may be admitted, this program is designed principally for persons who have a master's degree. GRE required for graduates of non-U.S. universities except under specific university partnership agreement.

**Program requirements:** A minimum of 72 credits beyond the B.S. degree. A M.S. degree may count up to 30 of these credits; the remaining credits are split between course work and dissertation research, 18-24 of which are dissertation credits and the remaining credits are course work. At least 15 credits of course work beyond the M.S. degree should be in graduate-level industrial and systems engineering courses including ISE 533, 555, and three course in one of the specialization areas. Qualifying examination may be waived for students with a master's degree in industrial engineering, systems engineering, or other related fields. A comprehensive examination must be taken after all formal course work is completed.