

**THE UNIVERSITY RESERVES THE RIGHT TO REVISE  
ANY INFORMATION LISTED IN THIS TIMETABLE OF CLASSES  
The University of Tennessee Space Institute  
Spring 2012 Course Listings**

**ENGINEERING MANAGEMENT**

**EM 501 Capstone Project (3-6)**

SEC. 001 CRN 23052

PROFESSOR: Dr. Greg Sedrick

Application-oriented project to show competence in major academic area. Enrollment limited to Engineering Management students in non-thesis program.

*Grading Restriction: Satisfactory/No Credit grading only.*

*Repeatability: May be repeated. Maximum 6 hours.*

*Comment(s): Requires enrollment in engineering management.*

*Credit Level Restriction: Graduate credit only.*

*Registration Restriction(s): Minimum student level – graduate.*

**EM 502 Registration for Use of Facilities (1-15)**

SEC. 001 CRN 23054 Sedrick

Required for the student not otherwise registered during any semester when student uses university facilities and/or faculty time before degree is completed.

*Grading Restriction: Satisfactory/No Credit grading only.*

*Repeatability: May be repeated.*

*Credit Restriction: May not be used toward degree requirements.*

*Credit Level Restriction: Graduate credit only.*

*Registration Restriction(s): Minimum student level – graduate.*

**EM 533 Theory and Practice of Engineering Management (3) (Video Recorded)**

SEC. 001 CRN 23056 UTSI students participating at Tullahoma or Oak Ridge

002 CRN 23057 UTSI students participating elsewhere

003 CRN 23058 UTK students participating at Knoxville DE classrooms

004 CRN 23059 UTK students participating elsewhere

TEXT: [http://www.utsi.edu/academics/iieandem/student\\_services.htm](http://www.utsi.edu/academics/iieandem/student_services.htm)

TIME: Monday 4:00-6:30 CST E-113

PROFESSOR: Dr. Denise Jackson

Principles of engineering management, including: business and organization design, culture, leadership, marketing and competition in global economy, motivation and performance management, empowerment, organizational behavior, and diversity. Systems thinking, learning organizations, and systems dynamics modeling. Principle application to work settings and case studies.

**EM 534 Financial Management for Engineering Managers (3) (Video Recorded)**

SEC. 001 CRN 23060 UTSI students participating at Tullahoma or Oak Ridge  
002 CRN 23061 UTSI students participating elsewhere  
003 CRN 23062 UTK students participating at Knoxville DE classrooms  
004 CRN 23063 UTK students participating elsewhere

TEXT: [http://www.utsi.edu/academics/ieandem/student\\_services.htm](http://www.utsi.edu/academics/ieandem/student_services.htm)

TIME: Tuesday 4:00 – 6:30 CST E-113

PROFESSOR: Dr. Gregory Sedrick

Financial and managerial accounting in engineering and technology management. Transaction recording, financial statements, ratios and analysis, activity-based accounting, and standard practices for costing, budgeting, assessment, and control.

**EM 541 Managing Change and Improvement in Technical Organizations (3) (Video Recorded)**

SEC. 001 CRN 23064 UTSI students participating at Tullahoma or Oak Ridge  
002 CRN 23065 UTSI students participating elsewhere  
003 CRN 23066 UTK students participating at Knoxville DE classrooms  
004 CRN 23067 UTK students participating elsewhere

TEXT: [http://www.utsi.edu/academics/ieandem/student\\_services.htm](http://www.utsi.edu/academics/ieandem/student_services.htm)

TIME: Thursday 4:00 – 6:30 CST E-113

PROFESSOR: Dr. Denise Jackson

Current topics, theories, and applications for managing change and innovation for performance improvement in organizations. Multi-initiative approaches: quality management, organizational effectiveness, employee empowerment, performance measurement, and application of statistical tools and techniques. Self-assessment and Baldrige criteria for performance excellence. Change agent, team building, and leadership issues. Case studies.

*(RE) Prerequisite(s): Industrial Engineering 516*

**EM 600 Doctoral Research and Dissertation (3-15)**

SEC. 001 CRN 28199 Sedrick

**INDUSTRIAL ENGINEERING**

**IE 518 Advanced Engineering Economic Analysis (3) (Video Recorded)**

SEC. 001 CRN 22665 UTK Students participating at Knoxville DE Classrooms  
002 CRN 22666 UTK Students participating elsewhere  
003 CRN 22667 UTSI Students participating at Tullahoma or Oak Ridge  
004 CRN 22668 UTSI Students participating elsewhere

TIME: Wednesday 4:00-6:35 CST E-113

TEXT: [http://www.utsi.edu/academics/ieandem/student\\_services.htm](http://www.utsi.edu/academics/ieandem/student_services.htm)

PROFESSOR: Dr. Joe Wilck

Application of engineering economic analysis in complex decision situations. Inflation and price changes; uncertainty evaluation using non-probabilistic techniques; capital financing and project allocation; evaluations involving equipment replacement, investor-owned utilities, and public works projects; probabilistic risk analysis including computer simulation and decision trees; multi-attribute decision analysis; and other advanced topics.

*(RE) Prerequisite(s): 405.*

*Recommended Background: Statistics 251.*

**IE 522 Optimization Methods in Industrial Engineering (3) (Video Recorded)**

SEC. 001 CRN 22669 UTK Students participating at Knoxville DE Classrooms

002 CRN 22670 UTK Students participating elsewhere

003 CRN 22671 UTSI Students participating at Tullahoma or Oak Ridge

004 CRN 22672 UTSI Students participating elsewhere

TIME: Monday & Thursday 10:15 – 11:30 CST E-113

TEXT: Wayne L. Winston; *Operations Research: Applications and Algorithms*; Brooks/Cole

CENGAGE Learning; 4<sup>th</sup> Edition; ISBN 0-534-38058-1

PROFESSOR: Dr. L. Montgomery Smith

Classical optimization applied to constrained and unconstrained, non-linear, multi-variable functions; search techniques; decision making under uncertainty; game theory; and dynamic programming.

*(RE) Prerequisite(s): Engineering Management 537.*

*Recommended Background: 301.*