

INDUSTRIAL *and* SYSTEMS ENGINEERING

Enrollment Fall 2009

Undergraduate Students
Average SAT Score

567
1262

Graduate Students
Ph.D.
Master's

286
61
225

Quality Indicators

Total Faculty **30**
Professors 11
Associate Professors 7
Assistant Professors 5
Non-tenured/Non-tenure Track 7

U.S. News & World Report Rankings
Rankings Among Public Institutions
7 Undergraduate
6 Graduate

Endowed Chair Holder 1
Endowed Professorship Holders 2

Centers and Laboratories

Advanced Metrology Laboratory
Computer Integrated Manufacturing Laboratory
Decision Analysis Systems Laboratory
Institute for Manufacturing Systems (TEES)
Logistics and Networked Systems Research Laboratory

Manufacturing Automation Laboratory
Modeling and Simulation Laboratory
RFID and Supply Chain Systems Laboratory Laboratory
Systems Modeling and Computational Optimization (SyMCo) Laboratory
Virtual Reality and Visualization Laboratory

Research Areas

Communications Systems

- Network Design and Configuration
- Survivability and Quality of Service Modeling
- Teletraffic Engineering

Enterprise Systems

- Capacity Planning
- Disruption Management
- Enterprise Risk Profiling

Homeland Security

- Robotics Applications to Search and Rescue
- Sensor Surveillance System Design
- Situational Awareness Modeling
- Test and Evaluation of First Responder Equipment
- Visualization and Virtual Environments

Human/Systems Interface

- Cognition
- Human/Computer Interaction
- Knowledge Acquisition
- Virtual Environments

Logistics and Supply Chain Management

- Closed Loop Supply Chain
- Coordination of Inventory, Scheduling and Transportation
- Multi-Commodity Flow Distribution Network Design
- Radio Frequency Identification
- Supply Chain Risk and Uncertainty
- Vendor Managed Inventory
- Warehousing, Transportation and Supply Contracting

Management and Decision Analysis

- Decision Making Under Uncertainty
- Engineering and Project Management
- Individual and Corporate Risk Preference and Analysis
- Modeling of Probabilistic Dependence
- Probability Assessment
- Teams

Modeling and Analysis of Biological Systems

- Forest Biomass Utilization
- Forest Fire Spread Modeling
- Population Modeling for Pest Management Control

Modeling and Analysis of Probabilistic Systems

- Air Traffic Scheduling
- Control within Fabrication Facilities
- Maintenance Science
- Optimal Replacement Analysis
- Queueing and Fluid-Flow Modeling

Modeling and Analysis of Production and Manufacturing

- Cost Modeling of Process Equipment and Facilities
- Electronics Manufacturing, Assembly, Packaging and Testing
- Facility Design
- Fast Hybrid Analytical Modeling/Simulation Capabilities
- Flow and Queue Analysis of Wafer Fabrication
- Lean Manufacturing Practices
- Material Handling
- Production Planning and Control

Modeling and Analysis of Service Systems

- Healthcare Delivery Systems
- Healthcare Treatment Planning
- Revenue Management
- Workforce Agility

Optimization

- Biological Systems (Bioinformatics)
- Graph Theory
- Intelligent Heuristics
- Linear, Nonlinear and Integer Programming
- Stochastic Optimization

Quality and Reliability Engineering

- Analysis and Design of Distributed Sensor Systems
- Data-Mining Methods
- Multivariate Analysis Methods for Process Monitoring, Diagnostics and Control
- Systems Reliability and Maintainability