ISyE Department

MISSION
Create, acquire, assimilate, apply, and transfer knowledge for the design, analysis, improvement and implementation of complex systems that include humans, materials, equipment and other resources — the essence of industrial and systems engineering.

VISION
To be a top-ranked industrial and systems engineering department recognized for our:

- Innovative educational curricula and learning experiences
- Strong, balanced research program
- Positive and diverse learning environment
- Beneficial outreach/technology transfer activities
- Leadership in the industrial and systems engineering profession

GUIDING PRINCIPLES
- Support and reward excellence and innovation.
- Create competencies for life-long learning.
- Foster environments for teamwork, diversity, and good university citizenship.
- Create partnerships with industry, government, and alumni.
- Act with professional and ethical responsibility.
- Advance the reputation of the industrial and systems engineering profession, the ISyE department, and the university.

AREAS OF RESEARCH FOCUS
- Reinventing manufacturing
- Reengineering healthcare
- Inventing new industrial-engineering methods
1. **Strengthen our department’s position as a leader in healthcare research.**
   
   **Plan:** Recruit an outstanding faculty member in healthcare. Increase our visibility in industry. Explore the feasibility, sustainability, and required investment involved in establishing a professional MS in health-systems engineering aligned with industry needs. **Resources:** College has agreed to provide one faculty line; department faculty will serve on search committee; communications specialist will assist in planning and publicity for healthcare summit. **Faculty Lead:** Carayon

2. **Position ourselves well to capitalize on College, regional, and national research initiatives in the manufacturing area.**
   
   **Plan:** Influence faculty recruiting for the Grainger Institute of Engineering. Build interdisciplinary and industry relationships needed to participate effectively in the Digital Manufacturing and Design Innovation Institute. Exploit research opportunities from the Department of Energy, the Department of Defense, the National Institute of Standards and Technology, and the National Science Foundation. **Resources:** College of Engineering has been successful in obtaining funding for faculty hires in the Grainger Institute of Engineering; College and campus have committed cost sharing to the Digital Manufacturing and Design Innovation Institute. **Faculty Lead:** Li

3. **Adapt our undergraduate program to handle increasing enrollment, freshman admissions, and evolving technologies.**
   
   **Plan:** Evaluate and test scalable strategies for handling increased enrollment while maintaining quality (including admissions criteria, curriculum, online education, staffing, room assignments, etc.); ensure strong recruitment and retention of freshman admits. **Resources:** Academic affairs cluster will review strategies for increasing enrollment; Engineering External Relations will assist with messaging and web redesign; department chair, student-services coordinator, and student and alumni affairs will work on ideas for retention of freshmen. **Faculty Lead:** Zhou