

# North Carolina Agricultural and Technical State University



## Industrial and Systems Engineering

**The Doctor of Philosophy (Ph.D.) and Master of Science (M.S.) in Industrial and Systems Engineering (ISE) programs** prepare students for successful careers in academia, industry, and the public sector. ISE graduate programs emphasize the systems engineering, collaboration and engagement skills critical to addressing the complex societal problems of tomorrow. ISE graduate students tackle these problems in a supportive environment working with nationally-recognized faculty.

ISE programs are inclusive of many undergraduate majors. Any engineering major may choose graduate education in ISE to expand systems skills. Many related non-engineering majors might choose ISE with some background courses to expand technical capability.

**Industrial and Systems Engineering** involves the use of quantitative and computational tools to improve the design and function of systems of people, material, equipment and information. ISE graduates contribute in a variety of roles: engineer, researcher, manager, and consultant; and in a diversity of industries: including healthcare, manufacturing, and education. A nationwide survey identified ISE as one of the career paths with the "happiest" people.

**Funding Opportunities** include projects sponsored by organizations such as the *National Science Foundation*, *Department of Defense*, *Department of Homeland Security* and *private industry*. Qualified students may also be eligible for teaching assistantships and/or tuition remission. A limited number of fellowships are available. Financial assistance is based on merit, date of acceptance and availability of funds.

**Research Laboratories** include Advanced Manufacturing, Biomechanics, Cognitive Systems, Decision Support Systems and Judgement, Human Systems Integration, Humanitarian/Healthcare Logistics Systems, Integrated Bio/Nano Manufacturing, Life Cycle Systems, and Perception/Visual Cognition.

**Employment Opportunities** estimated by the US Department of Labor predict ISE to have the second highest number of new jobs among engineering disciplines over the next ten years. ISE salaries are expected to be above the average for engineers. The flexibility of ISE is very attractive in an increasingly changing world.

**Admission** requirements are available by contacting the Graduate Program Coordinator or visiting the Graduate School website.



### Research Areas

- Advanced Manufacturing
- Data Mining and Analysis
- Healthcare Systems
- Human Factors and Ergonomics
- Humanitarian Logistics
- Military / Homeland Security Applications
- Systems Modeling and Optimization

### For More Information

#### Program Coordinator

Dr. Eui Park  
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#### Department Chair

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#### Program website

[www.eng.ncat.edu](http://www.eng.ncat.edu)



#### Graduate School website

[www.ncat.edu/~grad](http://www.ncat.edu/~grad)