



NC State Industry Expansion Solutions (IES) provides unique opportunities for engineering students and employers to partner in hands-on workplace experience, mentoring relationships and applied research.

For students, industrial engineering projects may focus on process optimization by helping to implement:

- Video-based time studies
- Plant layout design
- Process documentation
- Lean application
- Simulation
- Statistical process control
- Product ID (via RFID and barcoding)

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*Our clients have reported a sixfold return on their investments, with a total economic impact of nearly \$6 million since 2007.*

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Collaboration between students and employers can happen on campus, at the workplace, or any combination of the two, through any of the following assignments:

- 1. Student Project Team:** With over 100 projects involving 500+ students in the past decade, clients have reported strong impacts as a result of flexible short- and long-term projects, and engagement with students from diverse engineering disciplines, all supervised by IES. Past projects have focused on process documentation and optimization for clients such as Pepsi, Ingersoll Rand, Club Car, Kellogg's and Caterpillar.
- 2. Senior Design Project:** Part of the NC State Engineering curriculum, projects consist of student teams (3-5 individuals) solving problems defined by the client. Project duration is one semester and is overseen by course instructors.
- 3. Internship:** Students may work for an employer over an extended period of time on a single project or multiple projects, as defined by the company.

- 4. Student-on-Demand:** Students provide employers with task assistance on an as-needed basis. Project scope is typically limited and duration may be less than one semester.
- 5. Course Projects:** Coursework may encourage students to work on simulation projects. If performed within a semester, assignments are short and require no investment beyond faculty and industrial partner time spent mentoring the student.
- 6. Thesis/Ph.D. Research:** Graduate students may work with a specific organization or industry, gaining work experience that may serve as the basis for their master's thesis or dissertation.

### **Connections That Pay Forward**

Our clients report a sixfold return on investment, with a total economic impact of nearly \$6 million since 2007.

Students gain valuable hands-on experience and are paid a competitive hourly wage.



Industry Expansion Solutions

Industry Expansion Solutions (IES) is the engineering-based, solutions-driven, client-focused unit of NC State University. Our broad portfolio and deep industry expertise help organizations grow, innovate and prosper. Our extensive partnerships with business, industry, education and government generate a unique culture of collaboration that provides access to cutting-edge expertise, research, and technology.

### **Grow Your Business With Confidence. Contact Us Today.**

Visit our website: [www.ies.ncsu.edu](http://www.ies.ncsu.edu) to find the IES Regional Manager nearest you. Contact us by phone: 1.800.227.0264 or email: [iesservices@ncsu.edu](mailto:iesservices@ncsu.edu)

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