ITRE Educational Opportunities for Technicians and Engineers

Fundamental Engineering Principles (FEP) Program

About the Program:
• 10 courses that introduce engineering fundamentals
• For technicians with little or no engineering background
• Live online virtual classroom
• Weekly graded tests
• 3-hour comprehensive final exam
• 7 to 12 weeks (varies by course)
• 3 hours per week (one half day)

Course Offerings:

**Fall Semester**
- Mathematics
- Solid Statics/Strength of Materials
- Fluid Mechanics
- Horizontal & Vertical Alignment

**Spring Semester**
- Physics/Geotechnical
- Structure Design
- Hydraulics
- Highway Design

Cost: $400 to $700 per participant per course (varies by course length)

Contact us for more information: www.itre.ncsu.edu/training

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Highway Engineering Concepts (HEC) Course Partnership

About the Course Partnership:

- Partner with ITRE to provide an HEC capstone project-based course on site
- For technicians with FEP prerequisites: Math, Physics, and Horizontal and Vertical Alignment
- Students apply FEP skills to real world transportation engineering situations
- Weekly graded tests and projects
- 18 weeks (typical course length)
- 8 hours per week (one full day)

**Course Topics**: Transportation Planning; Highway Alignment and Design; Geotechnical Engineering; Statics; Strength of Materials: Structure Design; Hydraulic Engineering; and Traffic Operations

**Cost**: Varies by individual contract - contact us for more information

Fundamentals of Engineering (FE) Civil Engineering Review Course

The Course:

- 40 classes reviewing topics covered in the FE Exam
- For Civil Engineers meeting state eligibility requirements for the FE Exam
- Live online virtual classroom (pre-recorded option also available)
- 20 weeks
- 3 to 6.5 hours per week (one morning and one evening)

**Course Topics**: Test strategy; Math and Statistics; Statics; Dynamics; Mechanics of Materials; Fluid Mechanics; Engineering Economics; Ethics and Professional Practice; Computational Tools; Construction; Materials; Surveying; Transportation Engineering; Geotechnical Engineering; Structural Engineering; Hydraulic Engineering; and Environmental Engineering.

**Cost**: $905 per participant

Professional Engineering (PE) Civil Engineering Review Course

About the Course:

- 22 classes reviewing topics covered in the PE Exam
- For Civil Engineers who have at minimum four years post college experience and meet state eligibility requirements for the PE Exam
- Pre-recorded, self-paced
- 3 hours per class

**Course Topics**: Geotechnical Engineering; Water Resources; Structural Engineering; Construction and Materials; and Transportation Engineering.

**Cost**: $745 per participant

Contact for more information: [www.itre.ncsu.edu/training](http://www.itre.ncsu.edu/training)

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