

UNIVERSITY of HOUSTON | ENGINEERING

Department of Civil & Environmental Engineering

Calculator Policy for Undergraduate Courses

The only calculators that can be used during exams/quizzes/etc. in undergraduate courses taught by the Department of Civil and Environmental Engineering are those approved by the National Council of Examiners for Engineering and Surveying (NCEES) for use in the Fundamentals of Engineering (FE) and Principles and Practice of Engineering (PE) exams. These approved calculators are:

- **Casio: All fx-115 and fx-991 models** (any Casio calculator must have "fx-115" or "fx-991" in its model name)
- **Hewlett-Packard: HP 33s and HP 35s**
- **Texas Instruments: All TI-30X and TI-36X models** (any Texas Instruments calculator must have "TI-30X" or "TI-36X" in its model name)

The full NCEES calculator policy is available at ncees.org/calculator

<i>Most recommended calculator for each brand based on FE/PE calculator blogs*</i>		
Brand	Model	Price
Casio	fx-115 ES Plus	≈\$20
HP	35s	≈\$55
TI	36X Pro	≈\$20

* Can solve 3 equations, 3 unknowns. Some approved calculators limited to 2 equations, 2 unknowns. Refer to calculator manuals for details.

Engineering Licensure

- A licensed engineer is referred to as a registered engineer or Professional Engineer (PE).
- “Only a licensed engineer may prepare, sign and seal, and submit engineering plans and drawings to a public authority for approval, or seal engineering work for public and private clients.” Engineers are licensed by state and each state defines what constitutes the “practice of engineering” in that state. Each state also defines the exceptions to licensing requirements in that state.
- While each state has its own licensing laws, typically there is a four-step process to obtain licensure:
 1. Earn an engineering degree.
 2. Pass the Fundamentals of Engineering (FE) exam.
 3. Gain acceptable work experience (with an accredited degree like the UH BSCE degree, typically four years of engineering work under the supervision of a PE).
 4. Pass the Principles and Practice of Engineering Examination in the appropriate discipline. (Note - in Texas you can take the PE exam before completing your work experience, but you must first graduate and pass the FE.)

IMPORTANT - simply passing the FE Exam does not mean you are an Engineer-in-Training (EIT). You won't be an EIT in Texas until you have graduated with your BSCE degree, passed the FE exam, **AND** filed proper forms with the Texas Board of Professional Engineers.

For more information:

National Council of Examiners for Engineering and Surveying (NCEES)

- <https://ncees.org/engineering/fe/>

Texas Board of Professional Engineers and Land Surveyors (TBPELS)

- <https://pels.texas.gov/>