# **Mechanical PE exam**

The Principles and Practice of Engineering (PE) exam tests for a minimum level of competency in a particular engineering discipline. It is designed for engineers who have gained a minimum of four years' post-college work experience in their chosen engineering discipline.

Application to the California board is not required prior to examination for NCEES exams, however some licensing boards may require you to file a separate application and pay an application fee as part of the approval process to qualify you for a seat for an NCEES exam. Your exam type, discipline, module, and/or site cannot be changed after the NCEES registration deadline. A \$375 exam fee is payable directly to NCEES.

### Exam schedule

The exam includes 80 questions. The exam appointment time is 9 hours and includes

- Nondisclosure agreement (2 minutes)
- Tutorial (8 minutes)
- Exam (8 hours)
- Scheduled break (50 minutes)

The depth section focuses more closely on a single area of practice (80 questions):

- Mechanical: HVAC and Refrigeration (PDF)
- Mechanical: Machine Design and Materials (PDF)
- Mechanical: Thermal and Fluid Systems (PDF)

For details on the format and length of the exam, the topics covered, and applicable design standards, download the exam specifications (<u>https://ncees.org/engineering/pe/mechanical/</u>). PE exam specifications and design standards are posted 6 months before the exam administration.

#### Reference material and exam prep

The NCEES *PE Mechanical Reference Handbook* is the only reference material that can be used during the exam. You will be provided with an electronic reference handbook during the exam. For access prior to your exam, you can download a free electronic copy.

Register or log in to <u>MyNCEES</u> to download your free copy of the *PE Mechanical Reference Handbook*.

NCEES offers a <u>PE Mechanical practice exam</u> to familiarize you with the exam format and content, including <u>alternative item types (AITs)</u>. These practice exams contain questions that have been used on past exams and questions written just for study materials to give you extra practice.

The <u>NCEES Examinee Guide</u> is the official guide to policies and procedures for all NCEES exams. Download your free copy to find out more about registering for exams and what to expect on exam day.

### Scoring and reporting

Computer-based exam results are typically available 7–10 days after you take the exam. You will receive an email notification from NCEES with instructions to view your results in your <u>MyNCEES</u> account. Results include information specific to your licensing board regarding how you should proceed based on your performance.

#### Pass rates

The pass rates below represent PE examinees who took the PE for the first time. The ncees link to this information can be located here: <a href="https://ncees.org/engineering/pe/pass-rates/">https://ncees.org/engineering/pe/pass-rates/</a>

		Pass	Exam	
Exam	Volume	Rate	Туре	Availablity
PE Mechanical: HVAC and Refrigeration	664	75%	CBT	Year round
PE Mechanical: Machine Design and Materials	434	68%	CBT	Year round
PE Mechanical: Thermal and Fluid Systems	494	69%	CBT	Year round

## **Computer-based testing (CBT)**

NCEES began the process of transitioning exams to computer-based testing (CBT) in 2011. CBT offers many benefits, such as enhanced security for exam content and more uniformity in testing conditions. For most exams, it also provides greater scheduling flexibility.

The PE-Civil CBT exam will be administered year-round. NCEES constructs these exams using a linear-onthe-fly (LOFT) algorithm. This means that all examinees for a particular exam are required to answer the same number of questions in the same topics; however, no examinees will have the same set of questions. The algorithm will assemble a unique exam within the same specification framework (i.e., the same number of questions per topic area) and the same relative level of difficulty.

CBT exams include traditional multiple-choice questions as well as alternative item types (AITs). AITs provide opportunities to assess the technical knowledge of examinees using methods not available through paper-based testing. AITs include but are not limited to the following:

- Multiple correct—allow examinees to select multiple answers
- Point and click—require examinees to click on part of a graphic to answer
- Drag and drop—require examinees to click on and drag items to match, sort, rank, or label
- Fill in the blank—provide a space for examinees to enter a response to the question
- All questions, including AITs, are scored as either correct or incorrect. There is no partial credit