



COMPUTER-BASED EXAMS



PENCIL-AND-PAPER EXAMS

NCEES EXAMINEE GUIDE

DECEMBER 12, 2016

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ABOUT THE *NCEES EXAMINEE GUIDE*

The *NCEES Examinee Guide* is the official guide to policies and procedures for all NCEES exams. All examinees are required to read this document before starting the exam registration process. It is your responsibility to make sure that you have the current version.

NCEES exams are administered in either a computer-based format or a pencil-and-paper format. Each method of administration has specific rules. This guide describes the rules for each exam format. Refer to the appropriate section for your exam.

COMPUTER-BASED EXAMS

Fundamentals of Engineering (FE)

Fundamental of Surveying (FS)

Principles and Practice of Surveying (PS)

PENCIL-AND-PAPER EXAMS

Structural Engineering (SE)

Principles and Practice of Engineering (PE)

Agricultural and Biological Engineering

Architectural Engineering

Chemical

Civil (all modules)

Control Systems

Electrical and Computer: Computer Engineering

Electrical and Computer: Electrical and Electronics

Electrical and Computer: Power

Environmental

Fire Protection

Industrial and Systems

Mechanical (all modules)

Metallurgical and Materials

Mining and Mineral Processing

Naval Architecture and Marine Engineering

Nuclear

Petroleum

Software Engineering

COMPUTER-BASED EXAMS

CONTACT INFORMATION

NCEES computer-based exams are administered exclusively at approved Pearson VUE test centers.

CONTACT PEARSON VUE REGARDING:

- Comments about the test center
- Directions to a specific test center
- Inclement weather or power failure on your scheduled exam date
- Rescheduling an exam appointment

Visit: pearsonvue.com/ncees

Call: 888-866-8766

Email: Go to pearsonvue.com/contact/americas/customerservice, and complete the Contact Us form.

Office

hours: Monday–Friday
7 a.m.–7 p.m. Central time
Closed on local holidays

CONTACT NCEES REGARDING:

- Acceptable forms of ID
- Admittance requirements
- Contact information for licensing boards
- Evaluation of foreign education
- Exam accommodations
- Exam development
- Exam registration
- Exam scoring
- General information on the licensure process for becoming a professional engineer (P.E.) or professional surveyor (P.S.)

Visit: ncees.org

Chat: Click “Chat now” on any page within the ncees.org website.

Call: 800-250-3196

Email: clientservices@ncees.org

Write: P.O. Box 1686, Clemson, SC 29633

Office

hours: Monday–Friday
8 a.m.–5 p.m. Eastern time
Closed on local holidays

CONTACT YOUR STATE LICENSING BOARD REGARDING:

- Application for engineer intern (E.I.) or surveyor intern (S.I.) certification
- Qualifications for licensure (these vary by state/territory)

All NCEES exams are confidential, secure, and protected by the laws of the United States and elsewhere. They are to be used only for valid assessment and licensing purposes.

COMPUTER-BASED EXAMS

REGISTERING FOR A COMPUTER-BASED EXAM

Eligibility

Eligibility to sit for an NCEES exam varies by state/territory and is determined by each licensing board. It is your responsibility to review your licensing board requirements at [ncees.org/boards](https://www.ncees.org/boards) before registering for an exam.

MyNCEES Account

You must have a MyNCEES account to register for an exam. To create one, go online to account.ncees.org and follow the instructions. The information provided during this process will be used to create your appointment confirmation letter. The first and last names you use to register must match the government-issued ID that you will provide for admission to the test center.

How to Register

Log in to your [MyNCEES](https://myncees.org) account, select the REGISTER button, and follow the onscreen instructions. During registration, you will be required to agree to conduct transactions with NCEES by electronic means, including but not limited to the exam registration process. You will also be required to attest that you have read the rules and policies in the *NCEES Examinee Guide* and agree to comply with them.

REGISTRATION PROCESS

1. Register and pay for the exam.
2. Receive authorization notification from NCEES to schedule an exam.
3. Schedule the exam.
4. Receive the appointment confirmation letter from Pearson VUE.

We do the exams.
You do the math.
Study with NCEES.

Evaluate your readiness for the FE, FS, and PS exams by testing your knowledge with the most realistic computer-based simulation available.

The computer-based practice exams contain questions and solutions from past exams. They also simulate the real format, style, and level of difficulty.



COMPUTER-BASED EXAMS

Exam Fees

Exam fees are payable directly to NCEES during the registration process. NCEES accepts payments online via MasterCard, VISA, and American Express. Fees for each attempt are as follows:

| | |
|---|-------|
| Fundamentals of Engineering (FE) | \$225 |
| Fundamentals of Surveying (FS) | \$225 |
| Principles and Practice of Surveying (PS) | \$300 |

Some licensing boards require examinees to file a separate application and pay an application fee as part of their approval process in order to be qualified for seating for an NCEES exam.

Examinees approved to take an exam through a foreign entity will be assessed a nonrefundable \$25 international scheduling fee at the time of registration.

Scheduling Your Exam Appointment

Once your completed registration is approved, you will receive an email notification that you have been authorized to take the exam and are eligible to schedule your exam appointment. To schedule your exam, log in to [MyNCEES](#), select the SCHEDULE button, and follow the onscreen instructions. You must schedule an appointment time at least one full business day (24 hours) before taking the exam.

Year-Round Testing Opportunities

NCEES computer-based exams are offered in testing windows throughout the year during the following months:

- January–March
- April–June
- July–September
- October–December

NCEES policy states examinees may attempt a particular NCEES exam one time per testing window and no more than three times in a 12-month approval period, which begins with the examinee’s first attempt. Some licensing boards have a more restrictive policy. Visit ncees.org/boards to review the policy of the licensing board you selected during the registration process.

Register for and schedule your exam as far in advance as possible for the best scheduling availability. Failing to schedule your exam right away may result in reduced availability. You also run the risk of being unable to schedule your exam prior to the expiration of your 12-month approval window and of forfeiting your registration fee.

Appointment Confirmation Letter

You will receive an appointment confirmation letter from Pearson VUE via email once you have successfully registered for and scheduled your exam. The letter will confirm your identity, the location of your Pearson VUE test center, the time of your appointment, and the exam you are scheduled to take. Verify that the first and last names printed on the appointment confirmation letter match your first and last names as they appear on your government-issued ID. Contact NCEES before exam day if the names do not match. Bring your letter to the test center to avoid delays during the check-in process.

You can confirm the scheduled appointment and reprint the appointment confirmation letter by clicking the exam’s “Modify Appointments” button in your MyNCEES account.

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Rescheduling/Cancellations/Refunds

NCEES and Pearson VUE understand that circumstances may arise that require you to reschedule or cancel your exam. You may cancel or reschedule your appointment through your MyNCEES account. You may be entitled to a refund, depending on the date that you cancel or reschedule the exam. See below for details. Applicable refunds will be processed automatically and applied to the same credit card used when registering for the exam within 7–10 business days.

All reschedule fees are payable directly to Pearson VUE and are subject to applicable Pearson VUE fees. You must reschedule exam appointments at least 24 hours in advance of your scheduled appointment. Examinees who reschedule 24 to 48 hours in advance of their scheduled appointment will pay a higher fee than those who reschedule more than 48 hours in advance of their scheduled appointment.

You may cancel your exam as long as you do so more than 48 hours in advance of your scheduled appointment. Cancellations that are received more than 48 hours in advance of a scheduled appointment will be eligible for a refund of the NCEES registration fee less a \$50 administrative fee. Cancellations are not allowed within 48 hours of a scheduled appointment.

If a test center is open during inclement weather, neither NCEES nor Pearson VUE will make exceptions to refund and fee policies for examinees who cancel, reschedule, or fail to attend their scheduled appointment because of weather conditions.

If, on the day you are scheduled to test, you are unable to attend the exam for any of the following reasons, you may be allowed to

reschedule without paying a rescheduling fee or may be allowed to cancel with a full refund:

- Illness, either yourself or immediate family member
- Death in the immediate family
- Disabling traffic accident
- Court appearance or jury duty
- Military duty

To avoid any monetary penalty in such situations, you will be required to provide reasonable documentation to NCEES within 14 days of your originally scheduled appointment confirming why you were unable to test as scheduled.

If you have an issue regarding a payment or refund, contact NCEES directly at 864-654-6824. Fees associated with chargebacks, returned checks, or any form of disputed payment are the responsibility of the issuer.

Changing Your Exam Discipline or Licensing Board

If you decide to change your exam discipline or select a different licensing board after registering, you will need to cancel your existing exam and re-register for the new exam. You will be eligible for a refund of the NCEES registration fee less a \$50 administrative fee.

Exam Accommodations

NCEES provides reasonable and appropriate accommodations for individuals with documented disabilities within the meaning of the Americans with Disabilities Act, as amended (ADA). If you believe that you have a disability that prevents you from taking an exam under standard conditions, you may request accommodations.

Under ADA, a disability is a physical or mental impairment that substantially limits an individual's ability to perform one or more

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major life activities, as compared with most people in the general population.

Indicate your need for accommodations during the registration process. You will receive email confirmation from NCEES to acknowledge the request for accommodations. The NCEES Examinees with Disabilities Guide, which provides instructions on how to submit supporting documentation, can be found at ncees.org/exams/special-accommodations.

The review/approval process can take up to 30 days and will not begin until NCEES has received all required documentation. You will not be authorized to schedule an appointment for testing until this process has been completed.

Email questions related to the accommodations process to NCEES at accommodations@ncees.org.

Test Center Rules and Regulations

You will be required to review and agree to comply with the [NCEES CBT Exam Rules and Agreement](#) during the check-in process at the test center. In addition, the [CBT Nondisclosure Agreement](#) will appear onscreen prior to beginning your exam. In order to take the exam, you must agree to comply with the agreement within 2 minutes. If you do not accept the terms within 2 minutes or if you click “No,” the exam will end and you will forfeit your appointment and exam fees.

THE DAY OF YOUR COMPUTER-BASED EXAM

Arrive at the Pearson VUE test center 30 minutes before your scheduled appointment.

What to Bring

You must present one of the following IDs upon arrival at the test center:

- ID issued by a government entity in the country in which you are testing
- International travel passport in roman characters from your country of citizenship
- U.S. military ID

IDs must be current and

include an expiration date, your name and date of birth, a recognizable photo, and your signature. Valid U.S. military IDs that do not include a signature will be accepted. Student IDs will not be accepted.

The first and last name on your appointment confirmation letter and your ID must match. To help speed up the process while checking in, bring a printed copy of your appointment confirmation letter.

You are allowed to bring one NCEES-approved calculator into the testing room. You may store spare calculators and covers with your personal belongings. To review the list of approved calculators, visit ncees.org/exams/calculator.

Only the following items are allowed into the testing room:

- The ID used during the admission process
- A calculator (without the cover) that complies with the current [NCEES Calculator Policy](#)
- Key to your test center locker
- Reusable booklet and marker supplied by Pearson VUE
- Eyeglasses (without the case)
- Light sweater or jacket
- Items included in the [Pearson VUE Comfort Aid List](#)

DAY OF THE EXAM

- Appointment confirmation letter
- NCEES-approved calculator
- Acceptable form of identification
- Approved comfort items

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Items not permitted in the testing room include but are not limited to cell phones, handheld computers/personal digital assistants (PDAs) or other electronic devices, fitness trackers, pagers, watches, wallets, purses, hats and other head coverings (unless they qualify as religious apparel), bags, coats, books, notes, pens, pencils, erasers, food, and beverages.

You must store all belongings not permitted in the testing room in designated areas outside the testing room. Most test centers have small lockers. You must turn off all electronic devices before storing them in a locker. The test center is not responsible for lost, stolen, or misplaced personal items.

Approved Comfort Items

The test center will provide items included on the [Pearson VUE Comfort Aid List](#), such as earplugs, noise-canceling headphones, and tissues. These items do not require preapproval. Other comfort aids, such as braces (neck, back, ankle, etc.), hearing aids, eye drops, and mobility devices, will be allowed in the testing room upon visual inspection by test center staff. Test center staff will conduct the visual inspection by examining the item but will not physically touch you or the item.

Any items that do not appear on the [Pearson VUE Comfort Aid List](#) must be requested as a testing accommodation during the exam registration process and approved prior to scheduling your exam.

Reference Materials

The current version of the appropriate NCEES reference handbook will be supplied onscreen as a searchable PDF. All NCEES examinees will use a 24-inch monitor while testing to allow sufficient space to display both the exam question and the reference handbook. You can download the current version of the handbook from your [MyNCEES](#) account at no cost.

Testing Environment

All NCEES-approved Pearson VUE test centers provide a consistent testing environment for all examinees. To ensure a high level of security throughout the testing experience, you will be monitored at all times. Both audio and video may be recorded.

You are prohibited from eating, drinking, chewing gum, smoking, and making noise that creates a disturbance for other examinees during the exam.

Other individuals taking non-NCEES exams are likely to be testing at the same time as you, and neither NCEES nor Pearson VUE has control over keyboarding noises that may be associated with such exams if they include essay questions. A test proctor can provide you with noise-canceling headphones or earplugs if you encounter such a situation.

CHECK-IN PROCESS

Upon arrival at the test center, you will be provided a copy of the [NCEES CBT Exam Rules and Agreement](#) to review. You must indicate your agreement to comply with these rules by providing a digital signature before testing begins.

A Pearson VUE representative will confirm that the only items in your possession are ones allowed into the testing area. These items include your ID, an [NCEES-approved calculator](#) (without the cover), the key to your test center locker (if applicable), eyeglasses (without the case), a light sweater or jacket, and any approved comfort items.

Once you have placed any unapproved items in a test center locker (if available), the representative will take a digital photo of you and you will be directed to provide a palm vein scan. The palm vein scan will collect your palm

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vein image to digitally verify your identity and to protect the security and integrity of the exam. Your signature, palm vein scan, and photo will be securely transmitted and stored with your exam results.

After completing the check-in process, you will be escorted into the testing area, where a proctor will confirm your identity and ask you to provide another palm vein scan. You will be required to provide a palm vein scan each time you enter and exit the testing room.

After verifying your identity and the exam you will be taking, the proctor will answer any questions you might have, provide you with a reusable booklet and marker for scratch work, escort you to your workstation, and launch the exam. Upon entering the testing room, you may not communicate with other examinees.

THE EXAM APPOINTMENT

Prior to beginning an exam, you will be given 2 minutes to review and agree to comply with the **CBT Nondisclosure Agreement**. If you do not read and agree to comply with this agreement within 2 minutes, the exam appointment will end and all associated fees will automatically be forfeited.

After agreeing to comply with the *CBT Nondisclosure Agreement*, you will be provided an 8-minute tutorial to review how to advance through the exam questions, flag items for review, access the reference handbook, and do other exam-related tasks.

Additional reusable booklets are available at any time during the exam by raising your hand and notifying the proctor. The proctor will take and review your booklet before issuing a new one.

Notify the test administrator immediately if you experience any problems with the computer or software or encounter any other issue. The test administrator is not allowed to answer questions related to exam content.

Exam Format

The exam is divided into two sections. You'll be given the entire exam time at the beginning of the test. There are no individually timed sections, so manage your time accordingly.

| Exam | Exam time | Scheduled break | Number of questions |
|-------|-------------|-----------------|---------------------|
| FE/FS | 5 hr 20 min | 25 min | 110 |
| PS | 6 hr | 50 min | 100 |

All examinees are given 2 minutes to respond to the nondisclosure agreement and 8 minutes to view the tutorial.

After you see approximately half of the questions, you will be prompted to review and then submit them. You will no longer have access to those questions after you submit them. You will then have the option of taking a scheduled break (see next section). Manage your time accordingly to ensure that you have plenty of time to complete the remaining questions.

Breaks

You may take a **scheduled** break after completing, reviewing, and submitting approximately half of the questions.

You may take less than the designated amount for your scheduled break. However, any remaining break time will not extend the amount of time allocated for answering the remaining exam questions.

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You may exit the building during the scheduled break. It is important to return on time from the scheduled break and to allow time for the exam proctor to readmit you into the exam room. Once the break has expired, the exam clock automatically begins again.

You may also take **unscheduled** breaks at any time during the exam by raising your hand to notify a proctor. However, the amount of time you take for unscheduled breaks will be deducted from your testing time. You are not allowed to exit the building during unscheduled breaks.

While you are taking an **unscheduled** break, you are permitted to access only these personal items that you stored during the exam: beverages, food, and items on the Pearson VUE Comfort Aid List. You may also access medication required at a specific time, with the prior permission of the test administrator. You are not permitted to access any other personal items during an unscheduled break.

Exit Procedures

Raise your hand to notify the proctor when you have completed the exam. The proctor will confirm that the exam has ended properly, gather your reusable booklet and marker, and escort you to the receptionist area. All exam results will be encrypted and transmitted to Pearson VUE and NCEES, along with your digital signature, photo, and palm vein scan.

You will be given a verification-of-testing letter before leaving the test center. This letter will include your name, digital photo, and candidate ID, current date and time, and name of the exam. It serves as your confirmation of testing.

Exam Irregularities

Fraud, deceit, dishonesty, unprofessional behavior, and other irregular behavior in connection with taking any NCEES exam are strictly prohibited. Irregular behavior includes but is not limited to the following: failing to work independently; impersonating another individual or permitting such impersonation (surrogate testing); possessing prohibited items; communicating with other examinees or any outside parties by way of cell phone, personal computer, the Internet, or any other means during an exam; disrupting other examinees; creating safety concerns; and possessing, reproducing, or disclosing nonpublic exam questions, answers, or other information regarding the content of the exam before, during, or after the exam administration. Evidence of an exam irregularity may be based on your performance on the exam, a report from an administrator or a third party, or other information.

The test administrator is authorized to take appropriate action to investigate, stop, or correct any observed or suspected irregular behavior, including discharging you from the test center and confiscating prohibited devices or materials. You must cooperate fully in any investigation of a suspected irregularity. NCEES reserves the right to pursue all available remedies for exam irregularities, including canceling scores and pursuing administrative, civil, and/or criminal remedies.

If you are involved in an exam irregularity, the following may occur: invalidation of results, notification to your licensing board, forfeiture of exam fees, and restrictions on future testing. Some violations may incur additional consequences, to be pursued at the discretion of NCEES.

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Appeals

If your exam results are invalidated and you believe NCEES should review that decision, you may appeal to NCEES within 30 days from the date of the decision. You must send your appeal in writing by email, mail, or fax to the NCEES Manager of Compliance and Security.

In most cases, results are invalidated for one of two reasons. First, there is a good-faith reason to question the validity of the results. Second, you have engaged in activities prohibited by the *NCEES Examinee Guide*, the *NCEES CBT Exam Rules*, or the *CBT Nondisclosure Agreement*. If you decide to appeal, your appeal must provide information that resolves, to the reasonable satisfaction of NCEES, the concerns that led to the invalidation of your exam results. Your appeal should also indicate the specific relief requested. You will be notified of the NCEES action within 60 days after receipt of the appeal.

If you wish to contest a decision to invalidate your exam results, you may also choose to pursue arbitration in accordance with the procedure described in the [NCEES Agreement to Arbitrate](#). Arbitration may be pursued only after appealing a decision to cancel exam results. Arbitration is the final and exclusive remedy for challenging a decision by NCEES to cancel or invalidate exam results.

Examinee Comments

Provide any comments or concerns regarding the test center to a Pearson VUE representative before leaving the test center. Provide any comments regarding the exam to NCEES within 48 hours via your [MyNCEES](#) account.

Report suspicious activity or an exam irregularity by going online to ncees.org/exams/security or by calling 800-250-3196, ext. 5296 (to leave a message) or ext. 5467 (to speak to staff).

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Showcase your program. Compete for the prize.

The NCEES Engineering Award brings together licensed professional engineers and students to teach real-world lessons about professional practice and help students discover what the engineering profession is really all about.

EAC/ABET-accredited programs from all engineering disciplines are invited to compete.

Grand prize: \$25,000
5 awards: \$7,500 each

For more information or to enter this year's competition, visit ncees.org/award.



NCEES
advancing licensure for
engineers and surveyors

COMPUTER-BASED EXAMS

EXAM RESULTS

Exam results for computer-based exams 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 [MyNCEES](#) account. Results will include information specific to your licensing board regarding how you should proceed based on your performance.

All results are reported as pass or fail. If you fail the exam, you will receive a diagnostic report showing your performance for each of the major topics covered on the exam. The diagnostic report is provided to help identify the knowledge areas where improvement is needed before retaking the exam. The purpose of this report is to provide general information on performance; it is not designed or intended to be used for any other purpose. A [sample diagnostic report](#) is provided in the appendix of this guide.

Retaking the Exam

NCEES policy allows examinees to attempt a particular NCEES examination one time per testing window and no more than three times in a 12-month period, which begins with the examinee's original approval date. Some licensing boards have a more restrictive policy. Visit ncees.org/boards to determine the policy of the licensing board you selected during the registration process.

Scoring

Your exam results are based on the total number of correct answers that you selected. There are no deductions for wrong answers. The score is then converted to a scaled score, which adjusts for any minor differences in difficulty across the different exam forms. This scaled score represents an examinee's ability level and is compared to the minimum ability level for that exam, which has been

determined by subject-matter experts through psychometric statistical methods. NCEES does not publish the passing score because it varies slightly based on difficulty. NCEES scores each exam with no predetermined percentage of examinees that should pass or fail. All exams are scored the same way. First-time takers and repeat takers are graded to the same standard.

When an Error Occurs

NCEES and Pearson VUE endeavor at all times to ensure that registrations are properly processed and exams are properly prepared, handled, and scored. In the unlikely event that an error occurs, NCEES will, if possible, correct it.

If NCEES determines corrective action is warranted, you will be permitted either to retest at no additional fee or to receive a partial or full refund of your testing fees.

The remedies described above are the exclusive remedies available to an examinee for errors in registration, exam information, scoring (including reporting of exam results), or testing disruptions not caused by the examinee.

Disruptions in Testing and Potential Compromises

The following situations may prompt NCEES to consider invalidating or canceling exam results even though you may have had no responsibility for the event in question:

- Unanticipated cancellation or interruption of testing or deviation from required testing procedures, due to a weather event or other external cause
- Possible advance access to exam content by one or more examinees
- Other disruptions or compromises to the normal testing process

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If NCEES concludes that corrective action is warranted in one of these situations, you may be offered the option to either retake at no additional fee or to receive a full or partial refund of your registration fee provided that you did not cause and were not involved in the conduct that resulted in corrective action. These remedies are your exclusive remedies for such disruptions in testing and potential compromises. If you choose to retake, you must retake the entire exam to produce valid exam results.

If you are found to have caused or been involved in the conduct that resulted in corrective action, NCEES may treat the matter as an exam irregularity and may pursue all available remedies as described elsewhere in this guide.

EXAM CONTENT

NCEES conducts a content review for each exam every six to eight years. This process includes developing and administering a content survey and analyzing the survey results. This is a detailed process. Each step contains checks and balances to ensure that the resulting exams are fair to examinees and to provide the licensing boards with an adequate measure of each examinee's competency.

Current exam specifications are located online at ncees.org/exams.

Using Item Response Theory, a common statistical process for high-stakes exams, NCEES constructs the exams using a linear-on-the-fly (LOFT) algorithm. This means that all examinees for a particular exam are required to answer the same number of questions;

however, no examinees will have the same set of questions. The algorithm will assemble your unique exam within the same specification framework (i.e., the same number of questions per topic area) and the same relative level of difficulty.

Questions on most exams are in traditional multiple-choice format. However, Principles and Practice of Surveying (PS) exams will also use common alternative item types such as

- Multiple correct options—allows multiple choices to be correct
- Point and click—requires examinees to click on part of a graphic to answer
- Drag and drop—requires examinees to click on and drag items to match, sort, rank, or label
- Fill in the blank—provides a space for examinees to enter a response to the question

A video describing alternative item types for the PS exam is posted on ncees.org/AIT.

All exams include a limited number of pretest items that will not be scored and will not have an impact on your results. This is common practice within high-stakes testing and allows NCEES to evaluate the pretest items for potential use in future exams. These items are randomly placed within the exam and are not identifiable as pretest items.

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CONTACT INFORMATION

CONTACT NCEES REGARDING:

- Acceptable forms of ID
- Admittance requirements
- Contact information for licensing boards
- Evaluation of foreign education
- Exam accommodations
- Exam development
- Exam registration
- Exam scoring
- General information on the licensure process for becoming a professional engineer (P.E.), professional surveyor (P.S.), or structural engineer (S.E.)

Visit: [ncees.org](https://www.ncees.org)

Chat: Click “Chat now” on any page within the [ncees.org](https://www.ncees.org) website.

Call: 800-250-3196

Email: clientservices@ncees.org

Write: P.O. Box 1686, Clemson, SC 29633

Office

hours: Monday–Friday

8 a.m.–5 p.m. Eastern time

Closed on local holidays

CONTACT YOUR STATE LICENSING BOARD REGARDING:

- Applications for licensure
- Qualifications for licensure (these vary by state/territory)
- Renewal and continuing education requirements
- State-specific exams

All NCEES exams are confidential, secure, and protected by the laws of the United States and elsewhere. They are to be used only for valid assessment and licensing purposes. You can review the exam administration schedule for pencil-and-paper exams at [ncees.org/exams](https://www.ncees.org/exams) by clicking on PE exam or SE exam.

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REGISTERING FOR A PENCIL-AND-PAPER EXAM

Before registering for an upcoming NCEES exam, review your board's approval and registration process at ncees.org/boards.

Eligibility

Eligibility to sit for an NCEES exam varies by state/territory and is determined by each licensing board. It is your responsibility to review your licensing board requirements at ncees.org/boards before registering for an exam.

REGISTRATION PROCESS

1. Review your state's approval and registration process.
2. Create a MyNCEES account.
3. Log in to your account, select the REGISTER button, and follow the onscreen instructions.
4. Receive a confirmation email.
5. Receive an exam authorization about two weeks before the exam.

MyNCEES Account

You must have a MyNCEES account to register for an exam. To create one, go to account.ncees.org and follow the online instructions. The information provided during the registration process will be used to create your exam authorization, which will be used for admission to the exam site.

How to Register

Before registering for an NCEES exam, review the [approval and registration process for your licensing board](#).

To register with NCEES for your exam, log in to your MyNCEES account, select the REGISTER button, and follow the onscreen instructions.

During registration, you will be required to agree to conduct transactions with NCEES by electronic means, including but not limited to the exam registration process, and to attest that you have read the rules and policies in the *NCEES Examinee Guide* and agree to comply with them.

Once NCEES registration closes, you will not be permitted to make any changes to your exam or exam location.

Exam Fees

Most licensing boards require PE and SE examinees to file a state application and pay an application fee. In addition to state application fees, most PE and SE examinees will be required to pay actual test fees directly to NCEES during the registration process. NCEES accepts payments online via MasterCard, VISA, and American Express. Review the [policies and procedures of your licensing board](#) to determine specific fees, policies, and procedures.

Exam Confirmation

You will receive a confirmation email from NCEES once you have successfully completed the registration process.

Exam Authorization

You will receive an exam authorization approximately two weeks before the exam. It will confirm your identity, the location of your exam site, the exam administration date, and arrival instructions.

To avoid delays at the exam site, verify that the first and last names printed on the exam authorization match your first and last names as they appear on the government-issued ID that you will use during the exam check-in process. Contact NCEES for assistance before exam day if the names do not match.

PENCIL-AND-PAPER EXAMS

You can confirm your registration status and reprint your exam authorization through your [MyNCEES](#) account.

Cancellations and Refunds

Licensing boards are responsible for administering pencil-and-paper exams in their state or territory. Most use a third-party provider, and each has its own policies and procedures for cancellations and refunds. Visit nces.org/boards to determine the policies and procedures for your state or territory.

If you have an issue regarding a payment or refund, contact NCEES directly at 864-654-6824. Fees associated with chargebacks, returned checks, or any form of disputed payment are the responsibility of the issuer.

Exam Accommodations

NCEES provides reasonable and appropriate accommodations for individuals with documented disabilities within the meaning of the Americans with Disabilities Act, as amended (ADA). If you believe that you have a disability that prevents you from taking an exam under standard conditions, you may request accommodations.

Under the ADA, a disability is a physical or mental impairment that substantially limits an individual's ability to perform one or more major life activities, as compared with most people in the general population.

Indicate your need for accommodations during the registration process. You will receive email confirmation from NCEES to acknowledge the request for accommodations. The NCEES Examinees with Disabilities Guide, which provides instructions on how to submit supporting documentation, can be found at nces.org/exams/special-accommodations.

The review/approval process can take up to 30 days and will not begin until NCEES has received all required documentation. You will not be authorized to schedule an appointment for testing until this process has been completed.

Email questions related to the accommodations process to NCEES at accommodations@nces.org.

Test-Site Rules and Regulations

You must agree to abide by the [NCEES Candidate Agreement](#) at all times. The agreement is located in the appendix of this guide.

THE DAY OF YOUR EXAM

Refer to your exam authorization for instructions specific to your exam site.

What to Bring

You must present one of the following IDs upon arrival at the exam site:

- ID issued by a government entity in the country in which you are testing
- International travel passport in roman characters from your country of citizenship
- U.S. military ID

DAY OF THE EXAM

- Exam authorization
- NCEES-approved calculator
- Acceptable form of identification

IDs must be current and include an expiration date, your name and date of birth, a recognizable photo, and your signature. Valid U.S. military IDs that do not include a signature will be accepted. Student IDs will not be accepted. The first and last name on the examinee's ID and exam authorization must match.

PENCIL-AND-PAPER EXAMS

To avoid delays while checking in, bring a printed copy of your exam authorization.

You are allowed to bring NCEES-approved calculators into the exam room. To review the list of approved calculators, visit ncees.org/exams/calculator.

Reference Materials

Reference materials must be bound and remain bound during the exam. Bound refers to (1) materials permanently bound, as by stitching or glue, and (2) materials securely fastened in their covers by fasteners that penetrate all papers. Loose paper may be bound with ring binders, brads, plastic snap binders, spiral-bound notebooks, and screw posts, but not with staples. Writing tablets and legal pads

are not allowed. You may tab reference books before the exam with sticky notes and flags, but pads of sticky notes and flags are not permitted in the exam room. Refer to the [NCEES Candidate Agreement](#) to review the policy on references.

Testing Environment

NCEES strives to provide a consistent testing environment for all examinees.

CHECK-IN PROCESS

Upon arrival at the exam site, you will be required to present your exam authorization and acceptable identification to a proctor prior to being admitted into the exam room.



Taking the PE or SE? We've got your edge.

The same engineers who create the PE and SE exams also produce the NCEES practice exams.

Many questions that appear in NCEES study materials have been retired from the exam item banks. In other words, you are seeing actual questions from the past exams.

There is no better way to prepare for exam day.

We do the exams. You do the math.
Study with NCEES.



PENCIL-AND-PAPER EXAMS

Exam proctors will assist you in locating your assigned seat. Cell phones, smartwatches, fitness trackers, and other electronic devices are not allowed in the exam room at any time. If you have these devices in your possession after the exam begins, you will be dismissed from the exam room, your exam will be invalidated, and you will forfeit your exam registration fee.

Items permitted in the exam room are

- ID used during the admission process
- Exam Authorization (one copy)
- Calculator that complies with the [NCEES Calculator Policy](#)
- Wristwatches and small clocks
- Approved reference materials
- Eyeglasses (no case)
- Earplugs
- Two straightedges, such as a ruler, scale, triangle, or protractor
- Handheld, non-electronic magnifying glass (no case)
- Head coverings worn as religious apparel
- Snacks (such as hard candies, candy bars, gum) and nonalcoholic drinks

Items not permitted in the exam room include but are not limited to

- Cell phones, smartwatches, fitness trackers, and other prohibited electronic devices
- Loose paper, legal pads, and unbound or improperly bound notes
- Hats with brims, hoods (on hooded sweatshirts, for example)
- Unapproved calculator
- Slide charts, wheel charts, or drafting compasses
- Non-NCEES writing instruments or erasers
- Weapons of any kind
- Tobacco products
- Personal chairs

Review the [NCEES Candidate Agreement](#) for complete information about items allowed or prohibited in the exam room.

ON EXAM DAY

After everyone is seated, a proctor will begin reading the exam instructions. Once the proctor begins reading the instructions, examinees will no longer be admitted into the exam room. You will receive an NCEES pencil with an eraser to use during the exam. Using a non-NCEES writing instrument or eraser to complete any portion of the exam may lead to dismissal from the exam and/or invalidation of your exam results.

Breaks

You may request to take a break at any time by raising your hand and waiting for a proctor to assist you.

Exit Procedures

Raise your hand to notify the proctor when you have completed the exam. The proctor will collect the exam book and answer sheet before dismissing you. Once dismissed, you will not be permitted to re-enter the exam room. If you complete the exam within 15 minutes of exam time expiring, you must remain at your seat until the exam ends and all examinees are dismissed from the exam room.

Examinee Survey

NCEES will email you an online post-exam survey 7–10 days after the exam. This is your opportunity to provide feedback on the exam process and the exam site conditions. If you have feedback specific to an exam question, provide it immediately after the exam through your [MyNCEES](#) account.

PENCIL-AND-PAPER EXAMS

Exam Irregularities

Fraud, deceit, dishonesty, unprofessional behavior, and other irregular behavior in connection with taking any NCEES exam are strictly prohibited. Irregular behavior includes but is not limited to the following: failing to work independently; impersonating another individual or permitting such impersonation (surrogate testing); possessing prohibited items; communicating with other examinees or any outside parties by way of cell phone, personal computer, the Internet, or any other means during an exam; disrupting other examinees; creating safety concerns; and possessing, reproducing, or disclosing nonpublic exam questions, answers, or other information regarding the content of the exam before, during, or after the exam administration. Evidence of an exam irregularity may be based on your performance on the exam, a report from an administrator or a third party, or other information.

The chief proctor is authorized to take appropriate action to investigate, stop, or correct any observed or suspected irregular behavior, including discharging you from the test center and confiscating any prohibited devices or materials. You must cooperate fully in any investigation of a suspected irregularity. NCEES reserves the right to pursue all available remedies for exam irregularities, including canceling scores and pursuing administrative, civil, and/or criminal remedies.

If you are involved in an exam irregularity, the following may occur: invalidation of results, notification to your licensing board, forfeiture of exam fees, and restrictions on future testing. Some violations may incur additional consequences, to be pursued at the discretion of NCEES.

Appeals

If your exam results are invalidated and you believe NCEES should review that decision, you may appeal to NCEES within 30 days from the date of the decision. You must send your appeal in writing by email, mail, or fax to the NCEES Manager of Compliance and Security.

In most cases, results are invalidated for one of two reasons: First, there is a good-faith reason to question the validity of the results. Second, you have engaged in activities that are prohibited by the *NCEES Examinee Guide* or the *NCEES Candidate Agreement*. If you decide to appeal, your appeal must provide information that resolves, to the reasonable satisfaction of NCEES, the concerns that led to the invalidation of your exam results. Your appeal should also indicate the specific relief requested.

You will be notified of the NCEES action within 60 days after receipt of the appeal.

If you wish to contest a decision to invalidate your exam results, you may also choose to pursue arbitration in accordance with the procedure described in the [NCEES Agreement to Arbitrate](#). Arbitration may be pursued only after appealing a decision to cancel exam results. Arbitration is the final and exclusive remedy for challenging a decision by NCEES to cancel or invalidate exam results.

Examinee Comments

Provide any comments regarding a particular exam question to NCEES within 10 days via your [MyNCEES](#) account.

Report suspicious activity or an exam irregularity by going online to ncees.org/exams and completing the security tip line or by calling 800-250-3196, ext. 5296 (to leave a message) or ext. 5467 (to speak to staff).

PENCIL-AND-PAPER EXAMS

EXAM RESULTS

You will be notified when your results are available in accordance with the policies and procedures of the licensing board you selected during the registration process. The method of notification and length of time it takes to receive your results vary by licensing board. Most examinees will receive their notification via email from NCEES within 8–10 weeks with instructions to view your results through your [MyNCEES](#) account. Visit ncees.org/boards to review the policies and procedures associated with the licensing board you selected during the registration process.

Exam results are reported as pass or fail. If you fail the exam, you will receive a diagnostic report showing your performance for each of the major topics covered on the exam. The diagnostic report is provided to help identify the knowledge areas where improvement is needed before retaking the exam. The purpose of this report is to provide general information on performance; it is not designed or intended to be used for any other purpose. A [sample diagnostic report](#) is provided in the appendix of this guide.

Retaking the Exam

The number of times you are allowed to take an exam varies by licensing board. Visit ncees.org/boards to determine the policy of the licensing board you selected during the registration process.

Scoring

After each pencil-and-paper exam administration, every exam undergoes extensive statistical analysis to determine the minimum level of performance required for entry into the profession. This rigorous process helps ensure an equitable licensure system for examinees while upholding the standards of the profession. The steps are as follows:

1. All answer sheets are scanned as they are received from the exam sites. Scanners are calibrated before and during scoring.
2. A psychometric analysis is performed on a sample of answer sheets from each multiple-choice exam to identify any questions with unusual statistics. These questions are flagged for review.
3. At least two subject-matter experts, who are licensed engineers or surveyors, review the flagged items. In addition, the subject-matter experts consider examinee comments about specific exam questions. If the reviews confirm an error in a question, credit may be given for more than one answer.
4. When the analyses and reviews are completed, NCEES changes the answer keys as necessary. The passing score and final correct answers for each exam are then used to score all answer sheets. A percentage of the answer sheets are manually verified, and the results are compared to the machine score to ensure accuracy.
5. NCEES releases the results to the licensing boards and testing agencies, who in turn report the results to examinees.

When an Error Occurs

NCEES endeavors at all times to ensure that registrations are properly processed and that exams are properly prepared, handled, and scored. In the unlikely event that an error occurs, NCEES will, if possible, correct it. In cases where an error occurs and any part of the testing service is not delivered or completed, NCEES may permit you either to retest at no additional fee or to receive a partial or full refund of your testing fees.

PENCIL-AND-PAPER EXAMS

The remedies described above are the exclusive remedies available to an examinee for errors in registrations, exam information, scoring (including reporting of exam results), or testing disruptions not caused by the examinee.

Disruptions in Testing and Potential Compromises

The following situations may prompt NCEES to consider invalidating or canceling exam results even though you may have had no responsibility for the event in question:

- Unanticipated cancellation or interruption of testing or deviation from required testing procedures, due to a weather event or other external cause
- Possible advance access to exam content by one or more examinees
- Other disruptions or compromises to the normal testing process

If NCEES concludes that corrective action is warranted in one of these situations, you may be offered the option either to retake at no additional fee or to receive a full or partial refund of your registration fee, provided that you did not cause and were not involved in the conduct that resulted in corrective action. These remedies are your exclusive remedies for such disruptions in testing and potential compromises. If you choose to retake, you must retake the entire exam to produce valid exam results.



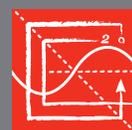
Do you need to be licensed in multiple states?

To practice in multiple states, professional engineers need their licenses to be mobile.

AN NCEES RECORD

- Is accepted by licensing boards nationwide
- Can be quickly and easily transmitted to any state board
- Reduces unnecessary paperwork for you

Let us keep track of your NCEES Record so that you can focus on what's ahead. Apply for an NCEES Record at [ncees.org/records](https://www.ncees.org/records).



NCEES
advancing licensure for
engineers and surveyors

$\int \left(\frac{1}{1-z^2u^2} \right) dz$
 $\int \frac{1}{(1+zu)(1-zu)}$
aside $\frac{1}{1-x^2}$
 $\left(\frac{1}{1+x} + \frac{1}{1-x} \right)$
so $\frac{1}{1-x^2} = \frac{1}{2} \left(\frac{1}{1-x} + \frac{1}{1+x} \right)$
 $\frac{1}{2} \int \left(\frac{1}{1-x} + \frac{1}{1+x} \right) dx$
 $\frac{1}{2} \ln \left(\frac{1+x}{1-x} \right)$
 $e^{\ln \left(\frac{1+x}{1-x} \right)}$

PENCIL-AND-PAPER EXAMS

If you are found to have caused or been involved in the conduct that resulted in corrective action, NCEES may treat the matter as an exam irregularity and may pursue all available remedies as described elsewhere in this guide.

EXAM CONTENT

NCEES conducts a content review for each exam every six to eight years. This process includes developing and administering a content survey and analyzing the survey results. This is a detailed process. Each step contains checks and balances to ensure that the resulting exams are fair to the examinees and to provide the licensing boards with an adequate measure of each candidate's competency.

Current exam specifications are available at [ncees.org/exams](https://www.ncees.org/exams).

NCEES CBT EXAM RULES AND AGREEMENT

Compliance with All Testing Rules: In order to be seated for an exam, all examinees must read and agree to comply with all requirements found in the *NCEES Examinee Guide*, which is available on the NCEES website. Examinees may request a copy of the guide from the test administrator. Those requirements include but are not limited to those listed here.

Items Permitted in Testing Room: Only the following items are allowed into the testing room:

- The ID used during the admission process
- A calculator that complies with the current NCEES Calculator Policy
- Key to your test center locker
- Reusable booklet and marker supplied by Pearson VUE
- Eyeglasses (without the case)
- Light sweater or jacket
- Items included in the [Pearson VUE Comfort Aid List](#) (copy available from the test administrator upon request)

Items Prohibited in Testing Room: Items not permitted in the testing room include but are not limited to: cell phones, hand-held computers/ personal digital assistants (PDAs), fitness trackers or other electronic devices, pagers, watches, wallets, purses, hats (and other head coverings, with the exception of those worn for religious purposes), bags, coats, books, notes, pens, pencils, erasers, food, and beverages.

All belongings not permitted in the testing room must be stored in designated areas outside the testing room. Most test centers have small lockers. The test center is not responsible for lost, stolen, or misplaced personal items.

Reusable Booklets: Pearson VUE reusable booklets cannot be used until after the exam has started, may not be removed from the testing room at any time during the exam, and must be returned to the test administrator immediately after the exam.

Breaks: After completing approximately half of the questions and clicking “End Review,” examinees may request an optional scheduled break. Examinees must return from their scheduled break on time. Time allocated for the second portion of the exam will be reduced by an amount equal to the time an examinee is late in returning.

Unscheduled breaks may be taken at any time during the exam. The exam timer will not stop for unscheduled breaks. Examinees may not leave the building during an unscheduled break.

NCEES CBT EXAM RULES AND AGREEMENT (CONTINUED)

To leave their seat, examinees must raise their hand and wait for an administrator to assist them. Only the following items may be accessed during an unscheduled break:

- Beverages
- Food
- Items included in the [Pearson VUE Comfort Aid List](#)
- Medication required at a specific time with prior approval of the test administrator

NO other items may be accessed.

Monitoring: To ensure a high level of security throughout the exam experience, examinees will be monitored at all times. Both audio and video may be recorded.

Computer Problems During Testing: Problems with the computer or software must be reported immediately to the test administrator.

Privacy Statement: Exam results will be encrypted and transmitted to Pearson VUE and NCEES. The test center does not keep any information other than when and where your exam was taken. The palm vein pattern template and the digital photograph will also be encrypted and transmitted to Pearson VUE and NCEES and may be compared against those of other test takers or otherwise used to detect potentially fraudulent or unauthorized activities.

Candidate Statement: By providing a digital signature, I give Pearson VUE my explicit consent to retain and transmit my personal data and test responses to Pearson VUE and NCEES (either of which may be outside the country in which I am testing). I have read and understand the *NCEES CBT Exam Rules* and agree to follow them. I understand and agree that if I do not follow the *NCEES CBT Exam Rules*, or if I am suspected of cheating, tampering with the computer, or engaging in any other improper activity, this will be reported to Pearson VUE and NCEES, my exam may be invalidated, I will not be refunded my exam fee, and NCEES may take other action that it deems appropriate, such as pursuing administrative, civil, or criminal remedies.

CBT NONDISCLOSURE AGREEMENT

This exam is confidential and secure, owned and copyrighted by NCEES and protected by the laws of the United States and elsewhere. It is made available to you, the examinee, solely for valid assessment and licensing purposes. In order to take this exam, you must agree not to disclose, publish, reproduce, or transmit this exam, in whole or in part, in any form or by any means, oral or written, electronic or mechanical, for any purpose, without the prior express written permission of NCEES. This includes agreeing not to post or disclose any test questions or answers from this exam, in whole or in part, on any websites, online forums, or chat rooms, or in any other electronic transmissions, at any time.

Please click on the response below to indicate whether you accept the terms of this agreement. Click “Y” to symbolize your signature and to accept these terms. You must click “Y” and then “Exit” to continue with the exam.

If you do NOT accept these terms, click “N” and let the test center staff know that you are finished with the exam. Clicking “N” will end the exam, and you will forfeit your exam fee.

- Y. Yes, I accept the terms of this agreement and agree not to disclose any part of this exam at any time.
- N. No, I do NOT accept the terms of this agreement.

NCEES AGREEMENT TO ARBITRATE

1. In the event that any legal dispute arises between you and NCEES in connection with your participation in any NCEES examination where that dispute is not resolved by the appeals process, you agree that the exclusive means for resolving the dispute shall be binding arbitration as described by the terms of this agreement. This means that you waive the rights you may have to resolve the dispute in a court of law or by any other means that might otherwise be available to you.
2. NCEES agrees to be similarly bound except that NCEES reserves its full rights to pursue injunctive and other appropriate relief in any state or federal court in cases of unfair competition or violations of, or threats to violate, any intellectual property rights of NCEES. With respect to any action filed by NCEES pursuant to this paragraph 2, you consent to submit to the jurisdiction of the state or federal court in which NCEES seeks relief.
3. Arbitration proceedings initiated pursuant to this agreement to arbitrate shall be conducted in accordance with the then current rules of the American Arbitration Association. The arbitration and any proceedings relating to it shall be held in Charlotte, North Carolina. The arbitrator's award shall be binding and may be entered as a judgment in any court of competent jurisdiction. Information about the American Arbitration Association, its rules, and its forms are available from the American Arbitration Association, 335 Madison Avenue, Floor 10, New York, New York, 10017-4605.
4. In the event of arbitration, the parties shall bear their own costs and attorneys' fees associated with the arbitration proceedings, unless the arbitrator directs one of the parties to pay the other's costs, or attorneys' fees, or both.
5. To the fullest extent permitted by law, no arbitration brought pursuant to this agreement shall be joined to any arbitration involving any other party whether through class-arbitration proceedings or otherwise.
6. This agreement is part of the registration process to take any NCEES examination. Your assent to be bound by it is a requirement for taking the examination, but you may sit for the examination only if you also fulfill all other conditions imposed by NCEES.

NCEES CANDIDATE AGREEMENT FOR PENCIL-AND-PAPER EXAMS

Licensure candidates qualified to take any NCEES pencil-and-paper exam must review this agreement and the *NCEES Examinee Guide* before sitting for the exam.

Examinees are required to sign their exam answer sheet before the exam starts to affirm that they have been provided this information, have read and understand the material, and agree to abide by the stated policies and procedures, which apply to all NCEES exams. Full compliance is required.

Approved Calculators

Only models of calculators listed below are permitted in the exam room.

- Hewlett Packard—**HP 33s** and **HP 35s** models, but no others.
- Casio—All **fx-115** and **fx-991** models. Any Casio calculator must contain **fx-115** or **fx-991** in its model name.
- Texas Instruments—All **TI-30X** and **TI-36X** models. Any Texas Instruments calculator must contain either **TI-30X** or **TI-36X** in its model name.

Admission Requirements

For exam admission, examinees must present their Exam Authorization and one of the following kinds of identification: (1) ID issued by a government entity in the country in which you are testing; (2) international travel passport in roman characters from your country of citizenship; or (3) U.S. military ID. All IDs must be current and include an expiration date, your name and date of birth, a recognizable photo, and your signature. Valid U.S. military IDs that do not include a signature will be accepted. Student and expired IDs will not be accepted. The first and last name on the examinee's ID and Exam Authorization must match.

For the morning session, examinees must report to the exam site by the time shown on the Exam Authorization. For the afternoon session, examinees must report to the exam room by the time announced at the exam site. Examinees who do not report at these times may not be admitted. No one will be admitted after the exam instructions begin.

Grounds for Dismissal from the Exam and/or Invalidation of Exam Results

- Having a cell phone in your possession
- Having loose papers, legal pads, writing tablets, or unbound notes in your possession
- Having a device with copying, recording, or communication capabilities in your possession. These include but are not limited to cameras, pagers, PDAs, radios, headsets, tape players, calculator watches, smartwatches, electronic dictionaries, electronic translators, transmitting devices, fitness trackers, and digital media players such as iPods.

CANDIDATE AGREEMENT (CONTINUED)

- Having a calculator that is not on the NCEES-approved list
- Using a non-NCEES writing instrument or eraser to complete any portion of the exam
- Copying from another examinee's answer sheet or colluding with other examinees
- Beginning the exam before the proctor instructs you to do so
- Failing to stop writing immediately when time is called
- Writing on anything other than your exam booklet or answer sheet
- Removing pages from your exam booklet
- Leaving the exam area without authorization
- Violating any other terms stated in this agreement that are cause for dismissal or exam invalidation

If any prohibited item is found in an examinee's possession after the exam begins, the item will be confiscated and sent to NCEES. No refund will be provided to examinees dismissed from the exam.

Exam to Be Scored

On exam day, examinees will receive only the exam listed on their Exam Authorization and will not be allowed to sit for a different exam. NCEES will score only the exam listed on the Exam Authorization.

Reference Materials

The Principles and Practice of Engineering (PE) and Structural Engineering (SE) exams are open-book exams. Examinees must bring their own reference materials. All reference materials must be bound and remain bound during the exam. Bound refers to (1) materials permanently bound, as by stitching or glue, and (2) materials securely fastened in their covers by fasteners that penetrate all papers. Ring binders, spiral binders, plastic snap binders, brads, and screw posts are acceptable fasteners. Staples are not acceptable fasteners. Writing tablets and legal pads are not allowed. Examinees may tab reference books before the exam with Post-it type notes and flags, but pads of Post-it notes and flags are not permitted in the exam room.

CANDIDATE AGREEMENT (CONTINUED)

Personal Items

Personal items are the sole responsibility of the examinee. Neither NCEES, the state board, exam proctors, or the site facility are responsible for any lost, misplaced, or stolen items.

- Examinees may bring snacks (e.g., hard candies, candy bars, gum) and nonalcoholic drinks, as long as having them does not disturb other examinees.
- Examinees may wear wristwatches or place them on the floor. Clocks must be placed on the floor.
- Examinees may not wear hoods (on hooded sweatshirts, for example) or hats with brims during the exam. Head coverings that qualify as religious apparel are permitted.
- Examinees may not bring slide charts or wheel charts (handheld cardboard or plastic calculating devices with rotating or sliding pieces) or drafting compasses.
- Examinees may not place crates, boxes, or bookends on the desktop.
- Examinees may not bring weapons of any kind.
- Examinees may not bring tobacco products or personal chairs.

Items Permitted on the Desktop

Examinees may have these items on the desktop during the exam:

- Exam Authorization and ID
- Exam booklet, solution pamphlets, and answer sheet
- Approved reference material
- NCEES-approved calculators
- NCEES-issued pencils with erasers
- Small snacks
- Eyeglasses (no case)
- Hand-held, nonelectronic magnifying glass (no case)
- Two straightedges such as a ruler, protractor, scale, or triangle

Exam Irregularities

Fraud, deceit, dishonesty, unprofessional behavior, and other irregular behavior in connection with taking any NCEES exam is strictly prohibited.

Irregular behavior includes but is not limited to copying or allowing the copying of exam answers; failing to work independently; possessing prohibited items; communicating with other examinees or outside parties by telephones, personal computers, the Internet, or any other means during the course of an exam; surrogate testing or other dishonest conduct; disrupting other examinees; creating any safety concerns; beginning the exam before instructed

CANDIDATE AGREEMENT (CONTINUED)

to do so; failing to cease work on the exam when time is called; and possessing, reproducing, or disclosing nonpublic exam questions, answers, or other information regarding the content of the exam without authorization, before, during, or after the exam administration. NCEES will conduct an analysis each exam administration to identify incidents of copying or collusion.

The chief proctor is authorized to take appropriate action to investigate, stop, or correct any observed or suspected irregular behavior, including discharging examinees from the exam site for prohibited activities and confiscating any prohibited devices or materials. Examinees must cooperate fully in any investigation of a suspected irregularity. NCEES reserves the right to pursue all available remedies for exam irregularities, including canceling results and pursuing administrative, civil, and/or criminal remedies. Examinees or other persons implicated in an irregularity will be identified to the state board, which may invoke additional sanctions. Examinees implicated in an irregularity will not receive exam results and will not be eligible for a refund of exam fees.

NCEES Response to Testing Errors, Disruptions in Testing, and Potential Compromises

In the unlikely event that a mistake occurs in printing, handling, or processing test materials or in scoring or reporting scores, the test administrator, after consultation with NCEES, will correct the error, if possible, or permit the affected examinees either to retest at no additional fee or to receive a refund of the exam fee. These are the sole and exclusive remedies available to examinees for errors in handling or processing registration materials; in printing, handling, or processing exams, answer sheets, and solution pamphlets; in determining or reporting results; and/or in investigating or responding to suspected irregularities.

NCEES, jurisdictions, and testing agents also take steps that are intended to ensure standardized administration on test day. If events occur that cause testing to be canceled or interrupted, involve a mistiming on any part of the test, result in a deviation from required testing procedures, raise concerns about possible advance access to exam content by one or more examinees, or otherwise disrupt or compromise the normal testing process, NCEES will determine whether corrective action is warranted, which could include canceling results or not scoring answer documents. If NCEES determines that corrective action is necessary, affected examinees may have the option to retest at no additional fee (normally on a future national test date) or to receive a refund of the exam fee, unless the affected examinees caused or were involved in the conduct that resulted in the need for corrective action, in which case the jurisdiction that authorized seating for the exam will have

APPENDIX

CANDIDATE AGREEMENT (CONTINUED)

the right to withhold either or both of these options. If a jurisdiction offers a retest and an examinee selects that option, the examinee may be required to retake the entire exam in order to produce a valid result. These are the sole and exclusive remedies available to any examinee who is affected by disruptions in testing or a potential exam compromise.

Special Testing Accommodations

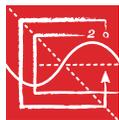
NCEES must receive testing-accommodation requests by the registration deadline. All testing accommodations must be approved by NCEES for each exam administration. Information about accommodations and the process for requesting accommodations are posted on the NCEES website.

Intellectual Property Rights and Exam Security

All NCEES exams are copyrighted works. Examinees are strictly prohibited from copying or disclosing any exam questions, problems, or answers, orally or in writing. This prohibition includes not discussing or disclosing any exam questions or problems on Internet blogs or chat rooms or through any other means.

Additional Information

Current exam specifications, preparation materials, scoring methods, and other exam information are available at [ncees.org](https://www.ncees.org) or by calling NCEES at 800-250-3196.



NCEES provides all examinees who do not pass with a diagnostic report to help them identify the knowledge areas in which they need to improve before retaking the exam. The purpose of this report is to provide general information on the performance of the examinee; it is not designed to be used for any other purpose.

The report shows the knowledge area, along with the number of items in each knowledge area and the examinee's performance in terms of a scaled score from 0–15. The report also provides information showing the examinee's relative performance in each knowledge area compared to the average performance of the passing examinees. The performance comparison chart is not shown to scale and simply indicates the relative performance to assist the examinee in preparing to retake the exam.

Please see the sample diagnostic report for the FE Electrical and Computer exam on the following pages. In reviewing the report, here is how the examinee should interpret the results. (Colors show are for illustrative purposes only. Actual reports are grayscale.)

-  Mathematics, Probability and Statistics, Power, and Computer Networks: My performance in these areas ranged from 7.4–8.2, but they were consistently lower than the average score of the passing examinees. There is definite room for improvement in these areas.
-  Ethics and Professional Practice, Properties of Electrical Materials, Engineering Sciences, and Electromagnetics: My performance in these areas ranged from 5.3–8.2, but I am significantly lower than the average score of the passing examinees. These are areas where I need to focus prior to retaking the exam.
-  My performance in Engineering Economics, Circuit Analysis, Linear Systems, Signal Processing, Electronics, Control Systems, Communications, Digital Systems, Computer Systems, and Software Development ranged from 8.1–15 and were all very close to the average performance of passing examinees—some a little lower and some higher. I should review these areas prior to retaking the exam to try to improve, but there are other areas that need more of my focus.

My study priorities before retaking the exam need to be as follows:

1. Mathematics, Probability and Statistics, Power, and Computer Networks—very strong focus. Even though my performance was closer to the passing examinees than the green topics, there are 26 questions in these areas versus 18 in the blue topics, therefore giving me more opportunity to improve.
2. Ethics and Professional Practice, Properties of Electrical Materials, Engineering Sciences, and Electromagnetics—strong focus
3. Engineering Economics, Circuit Analysis, Linear Systems, Signal Processing, Electronics, Control Systems, Communications, Digital Systems, Computer Systems, and Software Development—general review

For more information on the knowledge areas included in each of the FE and FS exams, download exam specifications at ncees.org/exams.



Diagnostic Report

The purpose of the diagnostic report on the next page is to provide feedback about your exam performance and to help focus your preparations for retaking the exam. The report cannot be used to determine the passing score.

The **Your Performance column** indicates your result by knowledge area converted to a scaled score of 0–15. The scaled score conversion is necessary for comparison purposes since each exam, while similar to other exams in overall difficulty, is unique. This also allows comparison of results by an examinee on multiple attempts. *The number of questions you answered correctly cannot be determined from this scaled score.*

The **last column** represents your performance in a knowledge area compared to the average performance of passing examinees. For each knowledge area, the portion of the bar between your performance (solid line) and the average performance of the passing examinees (dashed line) indicates the relative difference between your performance and the performance of the passing examinees.

Performance in a **knowledge area significantly below** that of the passing examinees contributed to your failing results. Substantial study of this material is recommended before retaking the exam.

Performance in a **knowledge area near or just above** that of the passing examinees indicates your understanding may be improved by further study, thus improving your chances of passing the exam.

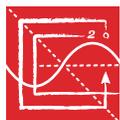
Each exam includes a limited number of **pretest items** that will not be scored and will not have an impact on your results. This is common practice within high-stakes testing and allows NCEES to evaluate the pretest items for potential use in future exams. These items are randomly placed within the exam and are not identifiable as pretest items.



FE Electrical and Computer

Your Performance Compared to the Average Performance of Passing Examinees

| | Knowledge Area | Number of Items | Your Performance (on a scale of 0 - 15) | Average of Passing Examinees = Your Performance = |
|----|------------------------------------|-----------------|---|--|
| 1 | Mathematics | 11 | 7.8 | |
| 2 | Probability and Statistics | 4 | 8.2 | |
| 3 | Ethics and Professional Practice | 3 | 7.1 | |
| 4 | Engineering Economics | 3 | 9.4 | |
| 5 | Properties of Electrical Materials | 4 | 7.1 | |
| 6 | Engineering Sciences | 6 | 8.2 | |
| 7 | Circuit Analysis | 10 | 8.3 | |
| 8 | Linear Systems | 5 | 8.1 | |
| 9 | Signal Processing | 5 | 8.7 | |
| 10 | Electronics | 7 | 8.9 | |
| 11 | Power | 8 | 7.4 | |
| 12 | Electromagnetics | 5 | 5.3 | |
| 13 | Control Systems | 6 | 9.1 | |
| 14 | Communications | 5 | 8.8 | |
| 15 | Computer Networks | 3 | 7.8 | |
| 16 | Digital Systems | 7 | 11.0 | |
| 17 | Computer Systems | 4 | 8.7 | |
| 18 | Software Development | 4 | 15.0 | |



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Sample Diagnostic Report for Pencil-and-Paper Exams (except SE constructed response exams)

NCEES provides all examinees who do not pass with a diagnostic report to help them identify the knowledge areas in which they need to improve before retaking the exam. The purpose of this report is to provide general information on their performance; it is not designed to be used for any other purpose.

The report shows the number of items in each knowledge area as well as the examinee's performance in terms of number of correct items and percentage correct. The report also provides information showing the examinee's relative performance in each knowledge area when compared to the average of the passing examinees. The performance comparison chart is not shown to scale and simply indicates the relative performance to assist the examinee in preparing to retake the exam.

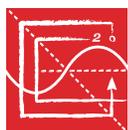
Please see the sample diagnostic report for the PE Chemical exam on the next page. In reviewing the report, here is how the examinee should interpret the results: (Colors shown are for illustrative purposes only. Actual reports are grayscale.)

-  Mass and Energy Balances and Thermodynamics: I only got 8 out of 19 correct in these knowledge areas, and that was a lot less than the average passing examinee. This is an area I need to work on.
-  Fluids: I seem to be consistent with the average passing examinee. I should still review this area prior to retaking the exam, but there are other areas that need more of my focus.
-  Heat Transfer: Again, compared to the average passing examinee, I'm in pretty good shape.
-  Mass Transfer: This is an area I really need to work on. Even though there are just 10 questions, I only got one correct, and the average passing examinee did much better than I did.
-  Kinetics: Again, overall the average passing examinee did better than I did. While there are just nine questions, I only got four correct. There's still room for improvement in this area.
-  Plant Design and Operation: Compared to the average passing examinee, I did better in two areas and worse in four. Overall, I got 10 out of 15 correct. Again, there's still room for improvement in this area.

My study priorities prior to retaking the exam are as follows:

1. Mass and Energy Balances and Thermodynamics, Mass Transfer—very strong focus
2. Kinetics, Plant Design & Operation—strong focus
3. Fluids, Heat Transfer—general review

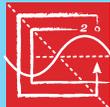
For more information on the knowledge areas included in each of the PE exams, download exam specifications at ncees.org/exams.



Principles and Practice of Engineering - Chemical

| | | | | | Your Performance Compared to Average of Passing Examinee |
|----|---|-----------------|--------------------------------|------------------------------|--|
| | Knowledge Area | Number of Items | Your Performance (No. Correct) | Your Performance (% Correct) | Average of Passing Examinees = $\frac{1}{n} \sum$ You = |
| 1 | Mass & Energy Balances & Thermodynamics: Mass Balances | 9 | 3 | 33 | |
| 2 | Mass & Energy Balances & Thermodynamics: Energy Balances & Thermodynamics | 10 | 5 | 50 | |
| 3 | Fluids: Fluid Transport | 2 | 2 | 100 | |
| 4 | Fluids: Mechanical-Energy Balance | 9 | 7 | 77 | |
| 5 | Fluids: Flow Measurement Techniques | 3 | 2 | 66 | |
| 6 | Heat Transfer: Mechanisms | 5 | 4 | 80 | |
| 7 | Heat Transfer: Applications | 8 | 5 | 62 | |
| 8 | Mass Transfer: Phase Equilibria | 4 | 0 | 0 | |
| 9 | Mass Transfer: Mass Transfer Contactors (Absorption-etc) | 5 | 1 | 20 | |
| 10 | Mass Transfer: Miscellaneous Separation Processes | 1 | 0 | 0 | |
| 11 | Kinetics: Reaction Parameters | 2 | 1 | 50 | |
| 12 | Kinetics: Reaction Rate | 2 | 0 | 0 | |
| 13 | Kinetics: Reactor Design & Evaluation | 3 | 2 | 66 | |
| 14 | Kinetics: Heterogeneous Reaction Systems | 2 | 1 | 50 | |
| 15 | Plant Design & Operation: Economic Considerations | 2 | 1 | 50 | |
| 16 | Plant Design & Operation: Design & Operation | 4 | 3 | 75 | |
| 17 | Plant Design & Operation: Safety | 3 | 3 | 100 | |
| 18 | Plant Design & Operation: Environmental | 2 | 2 | 100 | |
| 19 | Plant Design & Operation: Materials | 2 | 1 | 50 | |
| 20 | Plant Design & Operation: Process Control | 2 | 0 | 0 | |

- The purpose of this diagnostic report is to provide feedback about your exam results and to help focus your preparation for retaking the exam. It is neither intended nor designed to be used in determining the passing score.
- The last column represents your performance in a knowledge area compared to the average performance of all passing examinees. For each knowledge area, the portion of the bar between your performance (solid line) and the average performance of the passing examinees (dashed line) indicates the relative difference between your performance and the performance average of the examinees who passed.
- Performance in a knowledge area significantly below that of the average passing candidate contributed to your failing the exam. Substantial study of this material is recommended before retaking the exam. Performance in a knowledge area near or above that of the average passing candidate indicates your understanding may be improved by further study, thus improving your chances of passing the exam.



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$$m_0 \ddot{z} + \left(\frac{k}{m_0} \right) z - g$$
$$\frac{k}{m_0} \left(\frac{dz}{dt} \right)^2 - g$$