

COMMONWEALTH OF

VIRGINIA

ENGINEERING (FE / PE) AND SURVEYING (FS / PS / VIRGINIA
STATE SPECIFIC / LSB / MAPPING SCIENCES /
PHOTOGRAMMETRY) EXAMINATIONS
FIRST TIME APPLICANTS AND REPEAT CANDIDATES

CANDIDATE INFORMATION BULLETIN

Candidates will not be eligible for the examination without first applying to, and receiving approval from, the VA Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers, and Landscape Architects

FALL 2012 EXAM DATES AND DEADLINES:

6/18/2012	Board application deadline for PE's and all surveyors
6/19/2012	Board application deadline for non-student EIT's and SIT's
6/15/2012	NCEES registration begins
8/28/2012	Board application deadline for student EIT's and SIT's
9/6/2012	NCEES registration deadline and PCS scheduling deadline*
10/26/2012	Exams given for PE (other than structural), PE Structural (Vertical Forces only), PS, and LSA
10/27/2012	Exams for FE, FS, and PE Structural (Lateral Forces only)

SPRING 2013 EXAM DATES AND DEADLINES:

(LSB and Photogrammetrist exams are offered during the spring administration only.)

12/3/2012	Board application deadline for PE's and all surveyors
12/4/2012	Board application deadline for non-student EIT's and SIT's
12/17/2012	NCEES registration begins
2/12/2013	Board application deadline for student EIT's and SIT's
2/21/2013	NCEES registration deadline and PCS scheduling deadline*
4/12/2013	Exams given for PE (other than structural), PE Structural (Vertical Forces only), PS, LSA, and Photogrammetrist
4/13/2013	Exams for FE, FS, PE Structural (Lateral Forces only), and LSB

*Scheduling with PCS or registering with NCEES is NOT available after the deadline. NO EXCEPTIONS.

CALCULATORS

Please visit the NCEES website, www.ncees.org, for the most up-to-date information regarding calculators. Only the models on the [NCEES-approved list](#) may be used on the examination. All other models are prohibited in the exam room. The NCEES website also has information regarding examination content.

INTRODUCTION

The Virginia Department of Professional and Occupational Regulation (DPOR), Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects (APELSCIDLA Board) is responsible for licensing and regulating the engineering and surveying professions. The Board, through DPOR, has contracted with Professional Credential Services (PCS) to provide various testing services. Please read the following information carefully before completing the enclosed scheduling form. All inquiries regarding the examination must be directed to the Virginia Engineering Coordinator at PCS - this includes questions regarding both engineering and surveying examinations.

First-Time Candidates

You are considered to be a first-time candidate if you are an applicant who has never received approval from the Virginia Board or if you have lost your exam eligibility and must reapply to the Board.

1. All applicants must be approved by the Board. First-time applicants must contact the Board for application information. If approved, proceed to step 2.
2. All applicants must create an account online with NCEES. You may create an account 365 days a year at the NCEES website (creating an account is *not* the same as registering for the exam with NCEES). Proceed to step 3.
3. Register online with NCEES by the registration deadline. This deadline is strictly enforced; NO EXCEPTIONS. Select your exam and site information at this time. Only Board-approved applicants proceed to step 4.
4. Within 2-5 business days of registering with NCEES, applicants will receive an email from PCS with a link to schedule and pay for an exam. If you do not see the email in your Inbox, please check your Spam or Junk folder before emailing your PCS coordinator for the link. Exams must be scheduled and paid for by the scheduling deadline.

Re-Exam Candidates

You are considered to be a re-exam candidate if you are an applicant who has already received approval from the Virginia Board and your exam eligibility has not expired. Remember, you are exam-eligible for three years from the date the Board approved you for the exam.

1. All applicants must create an account online with NCEES. You may create an account 365 days a year at the NCEES website. If you have already created an account with NCEES, and your eligibility with the

Virginia Board will still be active *on the date of the exam*, proceed to step 2.

2. Register online with NCEES by the registration deadline. Even if you have already created an account and registered during another examination cycle, you still must register with NCEES *each time* you sit for an exam. Select your exam type and site information at this time. Proceed to step 3.
3. Within 2-5 business days of registering with NCEES, applicants will receive an email from PCS with a link to schedule and pay for an exam. If you do not see the email in your Inbox, please check your Spam or Junk folder before emailing your PCS coordinator for the link. Exams must be scheduled and paid for by the scheduling deadline.

ENGINEERING AND SURVEYING EXAMINATION FEES

Payment must be made by Visa, MasterCard, or Discover only.

EXAMINATION FEES

FE	\$145
PE (other than Structural)	\$255
PE Structural 16-Hour *	
8 hour Vertical Forces (Friday only)	\$500
8 hour Lateral Forces (Saturday only)	\$500
FS	\$190
PS	\$255
VA State-Specific Land Surveyor A	\$165
VA State-Specific Land Surveyor B**	\$315
Mapping Sciences (Photogrammetry)**	\$55
VA State-Specific Photogrammetry**	\$55

*Candidates may register for one or both structural exams. However, both exams must be passed within five years of each other in order for the candidate to receive an overall passing score for the PE Structural exam.

** Offered during the spring administration only.

WITHDRAWAL AND POSTPONEMENT POLICY

Candidates may request either a withdrawal or a one-time postponement before the scheduling deadline. The request must be in writing and forwarded to PCS via email. Requests after the scheduling deadline will only be approved in cases involving extenuating circumstances. Proper documentation may be required such as military orders, doctor notes (for illness), a death certificate (for a death in the family), etc. Extenuating circumstances are NOT job requirements, vacations, lack of study time, weddings, etc.

Please note: It is only *after* you submit your scheduling form or register via internet that you are considered "scheduled" for the examination with PCS. ONLY SCHEDULED CANDIDATES CAN REQUEST A POSTPONEMENT OR A WITHDRAWAL.

Candidates approved for a postponement will be transferred to the next available examination administration; however, their exam eligibility with the VA Board will *not* be extended. Candidates will be responsible for paying the difference if fee increases occur.

If a withdrawal is granted, the candidate will be withdrawn from the examination, and receive a refund less the \$50 non-refundable processing fee. Refunds may be issued 45 days after the examination date.

It is the candidate's responsibility to contact PCS prior to the test date if admission materials have not been received. Admission materials will be received via email accounts posted in NCEES records. If you do not appear for testing, and a withdrawal or postponement has not been granted, you will be

considered absent and will forfeit your examination fee. Absentee candidates should visit www.pcshq.com for rescheduling instructions.

SPECIAL ACCOMMODATIONS

In accordance with the provisions of the Americans with Disabilities Act (ADA), examination administration modifications are available for candidates who qualify. Also, candidates who are members of religious faiths that cannot take the examination on an assigned date may qualify for special accommodations. Candidates must visit the NCEES website (www.ncees.org) to read complete information as to the application procedures for special accommodations. All requests and supporting documentation must be submitted to NCEES before the specified deadline.

NAME OR ADDRESS CHANGES

Name and address changes must be submitted to both the Board office and PCS in writing. In order to change your name or address with PCS records you must show your old name or address and new name or address. Please include copies of any court documents if applicable (marriage or other legal name changes). Also include the name of the examination taken (profession) and examination date. Name or address changes may be emailed to vaeng@pcshq.com. Name or address changes may be faxed to the Board office at (866) 465-6206 or emailed to the Board at apelscidla@dpwr.virginia.gov.

**Candidates with name or address changes should submit the change before the NCEES registration deadline. If you fail to report this information prior to the deadline it can result in you missing the scheduled examination.

NOTIFICATION OF EXAMINATION ADMISSION

Approximately two weeks prior to the examination, candidates will receive an email from NCEES prompting them to log into their NCEES account and print their admission authorization. The authorization will include the date, time, and location of the exam.

Candidates determined to be ineligible for the examination will receive a partial refund of their scheduling fees approximately 45 days after the examination.

MECHANICAL PENCILS

Candidates must use the mechanical pencils provided by NCEES at the examination site (no other options).

TEST SITE AND REPORTING TIME

The exact test site location, map to the site, and reporting time will be provided in your admission materials. It is also suggested that you visit a website for driving directions from your departure location to the test site.

NCEES

Candidates are encouraged to visit the National Council of Examiners for Engineering and Surveying website (www.ncees.org) for information regarding the examination content, scoring system, and the latest information regarding the calculator policy.

ENVIRONMENTAL DISTRACTERS

Although every attempt is made to provide a quiet and comfortable testing environment, noise and room temperatures may be an unforeseen distracter. It is suggested that if you are sensitive to noise or temperature variations, you may want to bring earplugs and types of dress that can help you to adapt to a cooler or warmer climate in the examination room. PCS will work with the testing site staff to anticipate potential problems.

ADMISSION REQUIREMENTS

1. You must present your admission authorization and one form of government-issued identification with a photograph, signature, and expiration date (i.e. drivers license or passport) in order to be admitted to the examination room.
2. The identification must be current and clearly recognizable or you will not be admitted to the examination.
Military Candidates: If you have a Military ID without a signature, you must bring another form or ID showing your signature to the examination.
3. It is the responsibility of the candidate to be at the examination on time. Candidates will not be permitted into the examination room after the announcements have begun (NO EXCEPTIONS). It is strongly suggested that you visit the site before the day of the examination so you are familiar with the route and the needed travel time.
4. In the event of inclement weather or a national disaster, please call PCS for updates at (877) 364-3926.

FE/FS CANDIDATES ONLY

The FE is a closed-book exam. You will be provided with a FE Reference Handbook in your seat on exam day.

The FS is a closed-book exam. You will be provided with surveying reference formulas on exam day.

PE / PS / MAPPING SCIENCES CANDIDATES ONLY

You may use published books, codes, tables, standards and ordinances, and bound reference materials. Bound reference materials are defined as stitched, glued or fastened by spiral binders, plastic snap binders, brads or screws. Current regulations, available on the Board's website at www.dpor.virginia.gov/boards/apels, will print as a single sheet format and immediately become an "unbound document". Please bind all reference materials as noted above.

Candidates may tab reference books before the examination with Post-it™ type notes and flags, but pads of Post-it™ notes and flags are not permitted in the examination room. Candidates are not permitted to exchange reference materials or aids during the examination. Candidates are not permitted to write and make notes in any of the reference materials.

All items brought to the test site will be the candidate's sole responsibility. PCS, the Board or the facility are not responsible for any lost, misplaced, and/or stolen items.

ITEMS PROHIBITED IN EXAMINATION ROOM

Unapproved calculators are not permitted. Only the calculators listed on the NCEES website are permitted.

Devices or materials that might compromise the security of the exam or disrupt the examination process are not permitted.

Devices with copying, recording, or communication capabilities are not permitted. These include, but are not limited to, cameras, cell phones, desktop/handheld laptop, and palmtop computers, databanks, data collectors, organizers, pagers or beepers, PDA's, radios, headsets, tape players, MP3 players, portable fax machines, calculator watches, reproduction equipment, electronic dictionaries, electronic translators, transmitting devices and recorders.

Personal writing and erasing instruments may not be used to complete any portion of the examination. Only NCEES-supplied pencils and erasers are permitted. Loose paper, legal pads, writing tablets, and unbound notes are prohibited. All scratch work must be written in the exam book. Writing on any other paper including the supplied FE Reference Handbook, or removing pages from the examination book or Handbook, is strictly prohibited. Weapons of any kind, tobacco products, alcoholic beverages, and personal chairs are not permitted.

If any prohibited item is found in a candidate's possession after the examination begins, or if a candidate is found to be using a writing instrument other than the NCEES-supplied pencil, the item will be confiscated, the candidate will be dismissed from the examination, and his/her examination will not be scored or refunded. All confiscated items will be forwarded to NCEES.

SCORE NOTICES

Candidates may log in to their NCEES account to view their results. Please allow 8 to 10 weeks for NCEES to update individual accounts with exam results. Candidates will receive an email from NCEES when their results are ready for review. Engineer and surveyor license candidates who pass all of the requisite exams will receive their license in the mail from the Board within 10-12 weeks of passing the exams. Engineer-in-training and surveyor-in-training candidates, who pass the fundamentals exam, may contact the Board for their assigned designation number. A designation number issued by the Board is *not* a license; the number only identifies that you have passed the fundamentals exam.

SECURITY GUIDELINES

The Commonwealth of Virginia copyrights all test state-specific questions. Copying, reproducing or taking any action to reveal the contents of an examination in whole or in part is unlawful. Removal of an examination booklet, answer sheet or other confidential material supplied to you at the examination is prohibited.

Any irregularity such as an act of impersonation, creating a disturbance, giving or receiving unauthorized information or aid to other candidates, attempting to remove examination information by any means, or possession of unauthorized notes or equipment may be sufficient cause for you to leave the examination room. All such irregularities will generate a report to the Board.

The *Examination Site Conduct Agreement Form* will be supplied to you at the examination. The form provides for your agreement to the security guidelines discussed above and must be completed prior to taking the exam. No visitors, guests or children are permitted in the examination room.

VA STATE-SPECIFIC LAND SURVEYOR EXAM

Beginning with the October 2002 examination, the Virginia Surveyor license examination will be a one-part, multiple-choice examination.

The content outline is as follows:

1. Regulations
2. Virginia Statutes
3. Geomatics
4. Land Planning, Design and Drainage
5. Construction/Route Location Survey
6. Erosion and Sediment Control
7. Boundary Survey Law
8. Wetlands/Chesapeake Bay/Water Quality
9. Hydrographics

The examination will contain at least 50 questions. The actual number of questions will vary depending on the allocated difficulty and time per question. Questions cover Board regulations and statutes (approximately 50%) and technical knowledge (approximately 50%). Please be aware that regulation and statute questions are contained in each of the content areas noted above. There will be a two-hour time limit.

Candidate comment forms will be available in the event you wish to comment on a particular exam question. Please request a form from the proctor at the completion of your testing session.

SCORING AND REPORTING

Exams are scored based only on the number of correct answers provided; no penalty is assessed for an incorrectly answered question. A minimum scaled score of 70 must be obtained in order to achieve a passing score. Results are confidential and will be reported to the Board office. The Board office will notify you of your results.

SUGGESTED REFERENCES FOR VA STATE-SPECIFIC LAND SURVEYOR EXAM

- *Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects Regulations* 18VAC10-20 (et seq.)
- Library of Virginia Standards for Plats 17VAC15-60 (et seq.)
- *Code of Virginia* §28.2-1300 (et seq.) "Wetlands"
- *Code of Virginia* §54.1-400 (et seq.) "Architects, Engineers, Surveyors, Certified Interior Designers and Landscape Architects" (<http://VAengcode.notlong.com>)
- *Code of Virginia* §55-287 (et seq.) "Virginia Coordinate System"
- VDOT *Drainage Manual* (current edition)
- VDOT *Road and Bridge Standards* (current edition)
- VDOT *Survey Manual* (current edition)
- VDOT *Subdivision Street Requirements* (current edition)
- VDOT *Work Area Protection Manual* (current edition)
- VDOT *Road Design Manual* (current edition)
- VDOT *Program Manual* (current edition)
- DCR *Erosion & Sediment Control Handbook* (http://www.dcr.virginia.gov/stormwater_management/e_and_s.shtml)
- DCR Virginia Stormwater Management Handbook – DCR Publication
- DCR and VWRRC Virginia Stormwater Management BMP Clearinghouse (<http://vwrrc.vt.edu/swc/>)
- *Chesapeake Bay Preservation Area Designation and Management Regulations* 9VAC10-20 (et seq.)
- *US Clean Water Act*, Section 404 (<http://water.epa.gov/lawsregs/guidance/wetlands/sec404.cfm>)
- US Army Corps of Engineers *Hydrographic Survey Manual EM-1110-2-1003*, January 2002. (<http://140.194.76.129/publications/eng-manuals/em1110-2-1003/toc.htm>)
- US Army Corps of Engineers *Wetland Delineation Manual* Technical Report Y-87-1 (<http://el.erdc.usace.army.mil/wetlands/pdfs/wlman87.pdf>)
- *Virginia Wetlands Management Handbook* (http://www.ccrm.vims.edu/permits_web/guidance/handbook/handbook.pdf)
- *Clark on Surveying and Boundaries* (June 1998), Robillard and Bouman

- *Route Location and Surveying*, Hickerson
- *Surveying*, Francis H. Moffit/Harry Bouchard
- NOAA Tide Tables
- *Boundary Control and Legal Principles*, Robillard and Wilson
- *Easements and Revisions*, Donald Wilson
- *National Geodetic Survey – Geodetic Mark Preservation*

* All references to the *Code of Virginia* and the *Virginia Administrative Code* (VAC) only require attention in those areas of the codes that pertain to the practice of surveying. All codes may be accessed through the Virginia Legislative Information System at <http://leg1.state.va.us/>.

LAND SURVEYOR B (LSB) EXAM (Spring only)

The Land Surveyor B examination is an 8-hour multiple-choice examination with a morning and an afternoon session. The exam consists of approximately 50 questions which comprise both sessions. However, the number of actual test questions will vary. An individual must be licensed as a Virginia surveyor in order to take this examination. An overall scaled score of 70 must be achieved in order to pass the examination for licensure.

The same policies and procedures, previously listed in this bulletin, also pertain to this examination. The content outline is as follows:

1. *Erosion Control*
2. *Drainage and Storm Water Management*
3. *Incidental Plans/Profile*
4. *Land Planning and Design*
5. *Sanitary Sewer*
6. *Water Line Extensions*
7. *Federal/State/Local Standards*

SUGGESTED REFERENCES FOR LAND SURVEYOR B EXAM

- *Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects Regulations* 18VAC10-20 (et seq.)
- VDOT *Drainage Manual* (current edition)
- VDOT *Road and Bridge Standards* (current edition)
- VDOT *Survey Manual* (current edition)
- VDOT *Subdivision Street Requirements* (current edition)
- VDOT *Minimum Standards of Entrances* (current edition)
- DCR *Erosion & Sediment Control Handbook* (http://www.dcr.virginia.gov/stormwater_management/index.shtml)
- *Code of Virginia* §54.1-400 (et seq.) "Architects, Engineers, Surveyors, Certified Interior Designers and Landscape Architects" (<http://VAengcode.notlong.com>)
- VDH *Manual for Waterworks Regulations and the Practice for Waterworks Design*
- *Sewage Collection and Treatment Regulations* 9VAC25-790 (et seq.)
- References (of your choice) on Sanitary Sewer Design and the Practice of Surveying

* All references to the *Code of Virginia* and the *Virginia Administrative Code* (VAC) only require attention in those areas of the codes that pertain to the practice of surveying. All codes may be accessed through the Virginia Legislative Information System at <http://leg1.state.va.us/>.

Comment [p3]: Insert comma and space

Comment [p4]: Insert space after comma

Comment [p5]: Change to comma instead

Comment [p1]: Should be Stormwater

Comment [p2]: Should be Stormwater

MAPPING SCIENCES EXAM (Spring only) (Required for Photogrammetrists)

The Mapping Sciences examination is a 6-hour examination containing 100 questions. Candidates must pass the Fundamentals of Surveying Examination prior to attempting this examination. An overall scaled score of 70 must be achieved in order to pass the examination for licensure.

The same policies and procedures, previously listed in this bulletin, also pertain to this examination.

The content outline is as follows:

1. Statutes and Rules
2. Standards
3. Project Planning
4. Geodesy and Map Projections
5. Data Acquisition
6. Data Reduction and Analysis
7. Documentation and Map Presentation
8. Business Principles and Communication
9. Quality Assurance.

SUGGESTED REFERENCES FOR THE MAPPING SCIENCES

- *Elements of Photogrammetry with Applications in GIS*, Wolf & Dewitt (3rd edition)
- *Remote Sensing and Image Interpretation*, Lillesand & Kiefer (5th or 6th edition)
- *Digital Elevation Model Technologies and Applications: The DEM Users Manual* (2nd edition), edited by David F. Maune, PhD, CP
- *Glossary of the Mapping Sciences*
- *ASPRS Manual of Photogrammetry*
- *Introduction to Modern Photogrammetry*, Mikhail, Bethel, McGlone

VIRGINIA STATE-SPECIFIC PHOTOGRAMMETRY EXAM (Spring only)

The Virginia State-Specific Photogrammetry examination is a 2-hour examination containing 50 multiple-choice questions.

The content outline is as follows:

1. Regulations
2. Statutes
3. Control Field Practices
4. Photogrammetric Mapping
5. Virginia Mapping Standards
6. Flood Plain Mapping
7. Geometrics

SUGGESTED REFERENCES FOR THE VIRGINIA STATE-SPECIFIC PHOTOGRAMMETRY EXAMINATION

- *Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects Regulations* 18VAC10-20 (et seq.)
- *Code of Virginia* §28.2 *Fisheries and Habitat of the Tidal Waters*
- *Code of Virginia* §33.1-184 *Evidence as to existence of public road*
- *Code of Virginia* §42.1-92 (et seq.) *State Publications Depository Program*
- *Code of Virginia* §54.1-300 (et seq.) *Department of Professional and Occupational Regulation*
- *Code of Virginia* §54.1-400 (et seq.) "Architects, Engineers, Surveyors, Certified Interior Designers and Landscape Architects" (<http://VAengcode.notlong.com>)

- *Code of Virginia* §55-287 (et seq.) *Virginia Coordinate System*
- *Chesapeake Bay Preservation Area Designation and Management Regulations* 9VAC10-20 (et seq.)
- *Library of Virginia Standards for Plats* 17VAC15-60 (et seq.)
- *VDOT VA Work Area Protection Manual* (2002 edition)
- *VDOT Location and Design Survey Manual* (2002 or current edition)
- *Elements of Photogrammetry* by Paul R. Wolf and Bon A. Dewitt. McGraw Hill (2002). ISBN: 0-07-292454-3.
- *Manual of Photogrammetry*, (5th edition), ASPRS (American Society for Photogrammetry and Remote Sensing). Editor: J Chris McGlone, 2004. ISBN: 1-57083-071-1
- *Introduction to Modern Photogrammetry* by Edward M. Mikhail, James. S. Bethel, J. Chris McGlone. John Wiley & Sons, Inc.
- *Digital Elevation Model Technologies and Applications: The DEM Users Manual*. (2nd edition). Edited by David F. Maune, A Maune, ASPERS, 5410 Grosvenor Lane, Suite 201, Bethesda, MD 20814. ISBN: 1-57083-082-7. ISBN: 04-471-30924-9
- *Digital Elevation Model Technologies and Applications*. David Maune.
- *Geo World*, (January 2003), page 28.
- *A First Text on Geographic Information Systems*. Bolstad, P., (2002).
- *Model Virginia Map Accuracy Standards Guideline* (http://www.vita.virginia.gov/uploadedfiles/VITA_Main_Public/unmanaged/library/psqs/Guideline_Map%20Accuracy%20Guideline_701_00.pdf)
- National Geodetic Survey NAD83(NSRS2007) National Readjustment (<http://www.ngs.noaa.gov/NationalReadjustment/>)
- *Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques* by the Federal Geodetic Control Committee, (5/11/88, revised 8/1/89). (http://www.ngs.noaa.gov/FGCS/tech_pub/GeomGeod.pdf)

* All references to the *Code of Virginia* and the *Virginia Administrative Code* (VAC) only require attention in those areas of the codes that pertain to the practice of surveying. All codes may be accessed through the Virginia Legislative Information System at <http://leg1.state.va.us/>.