

ENGINEERS & SURVEYORS INSTITUTE

2021 EDUCATION PROGRAMS

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Dear ESI Colleagues,

Welcome to the 2021 academic year! We hope this finds you healthy and ready to embrace this New Year.

First and foremost, thank you to everyone involved in our transition to online classes due to COVID. Our dedicated team of instructors, including many of you, stepped up and rose to the challenge. We are grateful for all you do in helping make ESI the outstanding institution it is.

Please rest assured that during these interesting COVID times, we will work together to maintain high safety standards, while still maintaining the academic excellence and personalized attention in which ESI prides itself. In keeping with Virginia regulations, ESI will be conducting all classes online until further notice and COVID restrictions have been lifted. There are a few exceptions that include the LDE required and hands-on design classes. Special measures will be made for those hybrid classes while still adhering to mandated safety protocols.

Your success is central to our mission at ESI. As always, our doors are open and your thoughts and comments welcome. Please do not hesitate to contact us with any questions or concerns. We look forward to everyone having a great and healthy year!

Warmly,

Tammy Voss Ph.D.
Director of Member Education
(703)263-2232

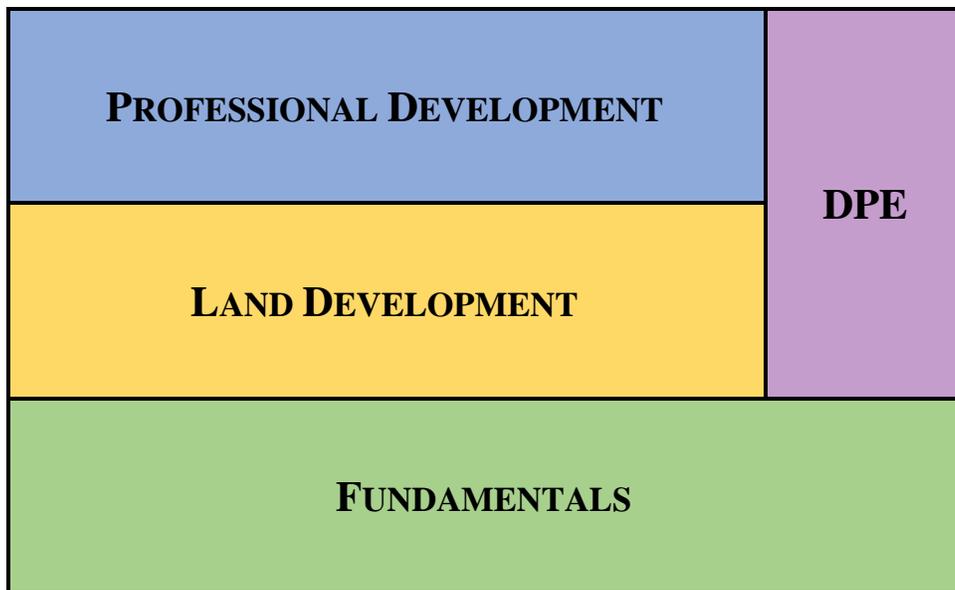
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INTRODUCTION TO ESI EDUCATION PROGRAMS

The continually changing demands of our industry require both public and private organizations to have employees with the skills and knowledge to respond to a variety of needs—often on short notice. To help these organizations stay abreast of these diverse educational demands, ESI has structured educational programs tailored for practicing professionals of all skill levels and technical disciplines.

ESI education programs use the **Knowledge for All Levels** approach, the organization of which is depicted in the figure below:



Put simply, our programs offer education opportunities for professionals throughout their lifetime of practice, from Fundamentals through Professional Development to Symposia and Seminars on “hot topics” as they arise.

Which courses should I take?

FUNDAMENTAL EDUCATION PROGRAM

Land development professionals who have little experience working in Northern Virginia (or those who *work with* land development professionals) should explore the Fundamental Education Program. The two-day course, **Fundamentals of Land Development in Northern Virginia**, is tailored to individuals who have the technical knowledge base associated with an undergraduate degree, minimal practical experience, or a lack of familiarity with the policies and practices of Northern Virginia's jurisdictions. (See page 14 for more information on this course.)

LAND DEVELOPMENT ENGINEERING (LDE) PROGRAM

Land development professionals looking for a more comprehensive approach should consider the two-semester **Land Development Engineering (LDE) Program**. These classes provide a basic level of understanding of land development engineering associated with land development plan design and review. Successful completion of these two semesters, plus the one-day **LDE Jurisdictional Sequence** for each jurisdiction in which one intends to become certified, is required before applying to obtain the **Designated Plans Examiner (DPE) Certification** (detailed information regarding the DPE Certification Program begins on page 9). (See pages 14-17 for more information on the LDE Program.)

Note: Those interested in specific aspects of land development may enroll in **individual classes** (piecemeal sequence) or an entire semester in the Land Development Engineering Program. Contact ESI for details.

PROFESSIONAL DEVELOPMENT (PD) PROGRAM

Experienced land development professionals should consider the Professional Development Program. These classes, with annually changing topics requested by our members, provide information of a more advanced and detailed nature about the most relevant subjects within the land development and surveying professions. They address general and jurisdictional issues that directly relate to the practical application of the various professional skills associated with the industry. (Information on current PD offerings begins on page 18.)

- **GENERAL EDUCATION CLASSES (PD ELECTIVES)** include various technical engineering, plan design, and surveying subjects that are of interest to the ESI membership. Some of these classes are specific to the local jurisdictions of Northern Virginia.

- **JURISDICTIONAL POLICY & PROCEDURE (P&P) UPDATE CLASSES** address changes to the plan design and review policies, regulations, ordinances and procedures which have occurred over the last year in local jurisdictions, as well as common errors and misconceptions which impede plan approval in those jurisdictions.
- **SYMPOSIA & SEMINARS** are offered as needed to quickly provide the latest information or techniques on key technologies, processes, and practices in land development design. These concentrated, fast-paced programs afford members a comprehensive conduit to the latest techniques and requirements surfacing in the land development arena.
- **ALTERNATE EDUCATIONAL OPPORTUNITIES** provide additional options to members for receiving credit for General Education Classes (PD Electives). These opportunities require ESI approval, as indicated, for authorization to obtain credit as a PD Elective.

Note: ESI classes meet standards set forth in the Commonwealth of Virginia (and other states) to comply with continuing education requirements for professional licensing renewal or reinstatement. Professionals always have the responsibility to determine the relevance of any class to their areas of practice.

ENROLLMENT/CANCELLATION OF ENROLLMENT IN ESI CLASSES

To Create an Account:

1. Go to <https://learn.esinova.org>.
2. In the top right corner, click Register.
3. Fill in information and click Create my new account.
4. Check your email for the confirmation link. Click the link, then click Continue in the window that opens.

To Enroll in a Course:

1. On the left side, under Dashboard, click Courses.
2. Click the year.
3. Click the class category.
4. Click the class in which you wish to enroll.
5. Click the green Enroll Me button.

You will receive an email confirming your enrollment.

To Cancel Enrollment:

1. Go to <https://learn.esinova.org>.
2. On the left side, under Dashboard, click My courses.
3. Click the class from which you wish to unenroll.
4. Under Administration, click “Unenroll me from (class number & name).”
5. To confirm, click Continue or Cancel.

CLASS ATTENDANCE POLICY

To ensure consistent compliance with its Commonwealth of Virginia charter to provide quality educational programs, ESI must verify attendance of individuals at all classes. This requires maintaining an auditable system of attendance validation. For in-class instruction, ESI uses sign-in and sign-out rosters at the beginning and end of classes to accomplish this. For online classes, attendance is also taken, and a class quiz or evaluation, returned to the ESI Education Department upon completion, is utilized to verify class participation. Consequently, those enrolled in a class are requested to avoid conflicts which may require them to arrive late or leave early. Some LDE classes are designated as REQUIRED due to the intensive hands-on and interactive/instructional design work and, consequently, cannot be made up.

CLASS CANCELLATION FEES

Individuals who must miss a class are requested to cancel their enrollment **at least one business day in advance of the class** (see instructions for cancelling on page 7.) Those who fail to do so may be **charged a \$75 administrative fee** to help defray the resulting cost of additional time and effort incurred by staff.

CLASS ASSESSMENTS

Assessments are important activities administered during ESI classes to determine the student's success in understanding the main points of the presentation and achieving its learning objectives. These assessments may be comprised of, although are not limited to, quizzes, online polling, practical exercises, group work, presentations, and exams.

MAKE-UP CLASS FEES

A \$75 administrative fee may be charged per Make-Up Class to fulfill annual education requirements for maintaining DPE status. This fee helps defray the additional time and expense incurred by staff to produce Make-Up Classes.

DPE CERTIFICATION PROGRAM

The Engineers and Surveyors Institute (ESI) operates under a Commonwealth of Virginia charter to promote the production of quality engineering plans and the expedited plan review process in jurisdictions throughout Virginia. Key to this process is the role of the Designated Plans Examiner (DPE).

DPE CERTIFICATION

The **Designated Plans Examiner** certification verifies that the holder is competent in the design, preparation, and submission of land development plans, thus allowing participation in an expedited process not available to non-certified practitioners.

From the *education* perspective, there are two categories of DPE status.

- **DPE-Eligible**: An individual who has completed the initial education requirement, but who has not yet applied for and/or been approved as a DPE, is considered “**DPE-eligible**.”
- **DPE-Certified**: An individual who has completed the initial education requirement and all other applicable prerequisites, and has applied for, been approved, and has received a DPE number, is considered “**DPE-certified**” and is simply referred to as a DPE.

Before applying to obtain the Designated Plans Examiner (DPE) certification, professionals must meet the following criteria:

1. Possess a **BS degree in Civil Engineering** (or a related field) or six years of experience in plan design or review.
2. Successfully complete the **Land Development Engineering Program**, which includes **Semesters 1 & 2** and the appropriate **Jurisdictional Sequence(s)**.
3. Perform the specified number of hours of **Peer Review** in the appropriate jurisdiction(s).
4. Accrue two years of **plan design or review experience** in the appropriate jurisdiction(s)—which meets the approval of the appropriate APE Board(s). (This is in addition to the six years required in lieu of a degree in Civil Engineering or a related field.)

EDUCATION REQUIREMENTS TO ESTABLISH DPE STATUS

(ELIGIBILITY)

Each member who wishes to become DPE-eligible, and subsequently, DPE-certified, must satisfy an initial education requirement. (After DPE status has been

established, an annual education requirement must be fulfilled in order to maintain it.)

Initial (one-time requirement) to Establish DPE-Eligibility:

Successfully complete the Land Development Engineering (LDE) Program

- **LDE Semester 1 & Semester 2:** These semesters provide the information necessary for certification as a Designated Plans Examiner (DPE). They consist of engineering, planning, and design classes that prepare the student to perform those tasks necessary to successfully design, prepare, and submit land development plans. (An individual who takes a class or semester by itself may not receive credit toward DPE-eligibility.)
- **LDE Jurisdictional Sequence(s):** This one-day session provides the student with all relevant jurisdictional material and lessons learned for *each* jurisdiction in which the member intends to seek certification.

Note: Please contact ESI to determine if all applicable prerequisites have been met prior to applying for DPE certification. After professionals meet all necessary requirements in the desired jurisdiction, they may apply for certification. The jurisdiction will review each application and award the Designated Plans Examiner status to those qualified.

Annual Education Requirements to Maintain DPE Status (Eligibility/Certification) become effective in January of the year after successful completion of the LDE Program.

EDUCATION REQUIREMENTS TO ESTABLISH DPE STATUS (ELIGIBILITY/ CERTIFICATION)

1. Successfully complete three **General Education Classes (PD Electives)** from the **Professional Development Program** in subjects relevant to the plan design, preparation, submission process or surveying, and business management.
2. Successfully complete the annual **Jurisdictional Policy & Procedure Update Class** for *each* jurisdiction in which the member is eligible/certified.
3. Perform the specified number of sessions of **peer review** for *each* jurisdiction in which the member is eligible/certified.

ATTENDANCE REQUIREMENTS TO ESTABLISH DPE-ELIGIBILITY

Those who enroll in the **Land Development Engineering Program**, to satisfy initial DPE education requirements, *may not miss more than one class per semester and must attend all classes in the appropriate Jurisdictional Sequence(s) to receive*

credit for the program. Any additional missed classes, eligible for makeup, must be completed prior to the end of that semester. In some cases, with REQUIRED classes, it may not be possible to complete a missed class until the following year.

Semester 1 of the program is scheduled from February through May, and **Semester 2** is scheduled from September through November. Although either semester may be taken first, the two-semester format is offered as a complete program, and all seeking to establish DPE-eligibility should enroll in both semesters. Each **Jurisdictional Sequence** of this program will occur in a one -day course after Semester 2 (in December). Dates and times will be announced for each jurisdiction during Semester 2.

ASSESSMENT REQUIREMENTS TO ESTABLISH DPE-ELIGIBILITY

Those enrolled in the **Land Development Engineering Program** are administered assessments throughout the program. These include class quizzes, practical exercises, and group work. A student who fails to satisfactorily demonstrate understanding of the main points and achievement of the learning objectives of a class, as assessed by the instructor, may be required to repeat that class. A final exam is given at the end of each semester. Students must pass both final exams to successfully complete this program.

GENERAL CLASS CATALOG INFORMATION

CLASS FEE SCHEDULE

<u>Program</u>	<u>Members</u>	<u>Non-members</u>
Fundamental Education Program		
Fundamentals of Land Development in Northern Virginia	\$870	\$1,500
Land Development Engineering Program		
For credit toward DPE-eligibility:		
Semester 1	\$1,560	\$3,000
Semester 2	\$1,560	\$3,000
Jurisdictional Sequences (per County)	<u>\$ 840</u>	<u>\$1,500</u>
Total Course Fee	\$3,960	\$7,500
Piecemeal Classes* (per class)	\$240	\$500

**May be taken for informational purposes but may not be applied toward DPE or DPE-eligible status.*

Professional Development Program

All Classes **	\$240	\$500
Symposium	\$180	\$350

***Member organizations earning non-DPE educational credits may use their credits for these classes. For details, please contact ESI.*

Note: If interested in individual or organizational membership, please contact ESI.

CLASS DETAILS

Class Descriptions: The descriptions of classes in this catalog are general representations of the content and level of the material that is intended for presentation. The exact information addressed is a function of each instructor's expertise and determination as to the best way to adequately cover material relevant to the topic of the class. The majority of ESI classes comprise lecture, interactive group activities, practical exercises, and assessments. As part of quality assurance, and to offer certain makeup classes, video/audio recording devices may be used during instruction and activities.

Class Dates: The dates published for classes are the projected dates that the courses are scheduled to occur. Various circumstances beyond the control of ESI occasionally necessitate that a class be rescheduled or cancelled. In the rare instance that either is required, staff will alert those enrolled as early as possible.

Class Location: To ensure student, instructor, and staff safety, all 2021 classes will be conducted online until further notice and COVID restrictions have been lifted. Most in-person classes will either be held in the **ESI** classroom, located at **4795 Meadow Wood Lane, Suite 115 East, Chantilly, VA 20151**, or at the respective jurisdiction or appropriate field/remote location.

Due to the nature of online classes, some classes may be fully completed before the scheduled end-of-class time and will be ended accordingly. Students, however, will be granted the full scheduled time (in most cases 3 hours), despite receiving the instructions within a condensed time frame.

ACADEMIC YEAR 2021 COURSE SCHEDULE

FUNDAMENTAL EDUCATION PROGRAM

Fundamentals of Land Development in Northern Virginia

This two-day course helps practitioners new to the Northern Virginia area understand the practical side of the land development process as it occurs in one of the busiest regions in the state. This orientation course will give professionals the basic information they need to quickly become productive employees in a practical application environment.

Some topics to be covered: **Overview of Plan Review Process in Fairfax & Loudoun Counties** (including County Codes & Ordinances & Public Facilities Manual), **Wetlands & Environmental Quality Corridors (EQC), Sanitary Sewers & Septic Systems, & Plan Design Topics with Local & State Officials** (including Virginia Stormwater Management Program & VRRM Spreadsheet, Erosion & Sediment Control, Urban Forestry, Water Authority, Fire Regulations, & Transportation). *Enrollment includes all classes on **both** days.* Due to the nature and extent of the Fundamentals class, ESI does not allow makeup sessions.

F101-21	November 3, 2021	9:00 am – 4:30 pm
F102-21	November 4, 2021	9:00 am – 4:30 pm

LAND DEVELOPMENT ENGINEERING PROGRAM

This two-semester program, similar to a college course, is designed to provide students with a basic operating knowledge of the procedural and technical aspects for accomplishing plan approval in the Northern Virginia land development process. These classes address all practical aspects of land development, often including interactive exercises.

Note:

- Professionals must successfully complete **both Semesters** and the appropriate **Jurisdictional Sequence(s)** to establish DPE-eligibility. (Land Development Engineering classes do not qualify as PD Electives.)
- During the COVID restrictions, LDE classes will be offered remotely, via the internet, until restrictions are released. It may be necessary to utilize hybrid classes (some in-class participants and some remote) during hands-on classes. In those classes, ESI greatly appreciates class members willing and able to support the class by participating in-person at the ESI classroom.

LAND DEVELOPMENT ENGINEERING – SEMESTER 1 (L100 SERIES)

L101-21	The History of Northern Virginia Land Development Tuesday, February 2	3:30 – 6:30 pm
L102-21	Evolution of Land Development Tuesday, February 9	3:30 – 6:30 pm
L103-21	Roles & Responsibilities of Key Players Tuesday, February 16	3:30 – 6:30 pm
L104-21	Environmental Issues Tuesday, February 23	3:30 – 6:30 pm
L105-21	Survey Mapping & Subsurface Utility Engineering Tuesday, March 2	3:30 – 6:30 pm
L106-21	Comprehensive Planning & Zoning Tuesday, March 9	3:30 – 6:30 pm
L107-21	Geometric Site Layout I ** Tuesday, March 16	3:30 – 6:30 pm
L108-21	Geometric Site Layout II ** Tuesday, March 23	3:30 – 6:30 pm
L109-21	Street Design I Tuesday, April 6	3:30 – 6:30 pm
L110-21	Street Design II Tuesday, April 13	3:30 – 6:30 pm
L111-21	Grading & Earthwork Tuesday, April 20	3:30 – 6:30 pm
L112-21	Tree Conservation Plan Preparation Tuesday, April 27	3:30 – 6:30 pm
L113-21	Floodplain Studies Tuesday, May 4	3:30 – 6:30 pm
L114-21	Drainage Outfalls Tuesday, May 11	3:30 – 6:30 pm
L115-21	Semester 1 Exam Tuesday, May 18	3:30 – 6:30 pm

*** This is a hands-on design class and has a mandatory attendance requirement.*

LAND DEVELOPMENT ENGINEERING – SEMESTER 2 (L200 SERIES)

L201-21	Storm Drainage Design Tuesday, September 7	3:30 – 6:30 pm
L202-21	Stormwater Planning Tuesday, September 14	3:30 – 6:30 pm
L203-21	Stormwater Management—Quality Tuesday, September 21	3:30 – 6:30 pm
L204-21	Stormwater Management—Quantity Tuesday, September 28	3:30 – 6:30 pm
L205-21	Utilities—Wastewater Design Tuesday, October 5	3:30 – 6:30 pm
L206-21	Utilities—Water Distribution Tuesday, October 12	3:30 – 6:30 pm
L207-21	Erosion & Sediment Control Tuesday, October 19	3:30 – 6:30 pm
L208-21	Utilities—Dry Utilities Tuesday, October 26	3:30 – 6:30 pm
L209-21	Site Design Process: Steps & Procedures ** Tuesday, November 2	12:30 – 6:30 pm
L210-21	Site Design Process: Steps & Procedures ** Tuesday, November 9	12:30 – 6:30 pm
L211-21	Document Production—What & How Tuesday, November 16	3:30 – 6:30 pm
L212-21	Engineer’s/Surveyor’s Roles During Construction Tuesday, November 23	3:30 – 6:30 pm
L213-21	Final Exam Semester 2 Tuesday, November 30	3:30 – 6:30 pm

*** This is a hands-on design class and has a mandatory attendance requirement.*

LAND DEVELOPMENT ENGINEERING – JURISDICTIONAL SEQUENCES
(L300 SERIES)

Administrative Requirements for Plan Submission and Site Completion

Fairfax County Sequence (L310-21)

9:00 am--4:00 pm

This one-day course will be presented in the Herry Building at the Fairfax County Government Center in Fairfax, unless otherwise notified. December dates to be announced. (Required to establish DPE-eligibility in Fairfax County.)

- L310-21**
- LDS Introduction**
 - Planning Process**
 - Zoning Ordinance**
 - Site Plans/Subdivisions/Infill Lots**
 - Peer Review**
 - Customer & Technical Support Center**
 - Stormwater Code & Regulations**
 - Tree Conservation Ordinance**
 - Expedited Review**

Loudoun County Sequence (L320-21)

8:30 am--4:30 pm

This one-day course will be presented at the Loudoun County Government Center in Leesburg, unless otherwise notified. December dates to be announced. (Required to establish DPE-eligibility in Loudoun County.)

- L320-21**
- Welcome to Loudoun County, Zoning**
 - Legislative Process**
 - Subdivision Process**
 - Site and Construction Plan Process**
 - Bonding Process**
 - Expedited Review**

PROFESSIONAL DEVELOPMENT PROGRAM

GENERAL EDUCATION CLASSES (PD ELECTIVES)

P501-21 Energy from Waste – A Sustainable Approach to Waste Management

COVANTA Fairfax online site and facility tour. The United States landfills about 250 million tons of municipal solid waste a year. Global leaders in Europe are recycling far more than we do in the United States and often turn to waste-to-energy for managing waste remaining after recycling, drastically reducing waste sent to landfills. This talk will introduce participants to waste-to-energy and explain how it fits in a more sustainable approach to waste and materials management.

This presentation will be given by Michael Van Brunt P.E., Sr. Director of Sustainability at COVANTA. Michael's primary focus is on sustainability strategy, planning, and reporting.

Thursday, January 28

3:30 – 6:30 pm

P502-21 Business Development

By the end of this class, participants will be able to: identify the differences and similarities between marketing and business development, learn how and where to identify leads and create a pipeline of upcoming projects, understand the different Client Retention Management (CRM) platforms, learn to create authentic Business Development (BD) Strategies to build relationships and develop a strong association and peer group strategy.

Thursday, February 4

3:30 – 6:30 pm

P503-21 ADA Compliance: Retrofitting & New Construction: Getting It Right the First Time!

Participants in this class will look at the trials & tribulations of a Title II agency in the application and administration of standards and guidelines with the Americans with Disabilities Act. In addition, they will review some common before and after project examples, such as how to avoid common mistakes, best practices in design and construction, including some ADA basics (parking, curb cuts, ramps, routes, restrooms, etc.) and finally, solid resources for problem solving.

Thursday, February 11

3:30 – 6:30 pm

P504-21 Hydraulic Modeling for Water Distribution Systems

This course introduces hydraulic models for water distribution systems and covers how modeling can be applied to optimize a robust and redundant infrastructure, plan for outages, and determining firefighting capabilities. Upon completion, participants

will be able to successfully: layout the components of a hydraulic model, define Hydraulic Grade Line (HGL) and head loss, assign demands to a model, interpret the impacts to HGL in the distribution system and pressure pipe models based on demands and head loss, recognize how to ensure robust and redundant infrastructure, determine available fire flow for fire-fighting capabilities, perform outage analysis and better plan for outages and assess water quality within the distribution system.

Thursday, February 18

3:30 – 6:30 pm

P505-21 So You Want to Be a Project Manager?

Participants in this class will learn about and engage in the following key items: defining Project Management, leadership skills needed to successfully lead your project and your team, effective negotiating skills with your client and your team members, scheduling tips to meet deadlines and budgets and the value of soft skills.

Thursday, February 25

3:30 – 6:30 pm

P506-21 Traffic Engineering

Topics will include the elements of traffic impact analysis, policy, and procedure. The following details will be discussed specifically: the four-step travel demand forecasting model and ITE methodology; intersection design elements including traffic control device warrants, signal timing, delay, and capacity; capacity and level-of-service analysis for interrupted and uninterrupted flow facilities for stand-alone or coordinated signal systems; traffic engineering studies including volume studies, travel time studies, accident studies, spot speed studies.

Thursday, March 4

3:30 – 6:30 pm

P507-21 A Walk Through the Clean Water Act from a Compensatory Mitigation Perspective

Participants will become familiar with compensatory mitigation requirements of the Clean Water Act and the implementation of the 2008 mitigation rule. Further discussion will include the parameters needed to create a successful wetland or stream mitigation bank, the current state of the market, including a discussion on why there is a shortage of credits, and alternative compensatory mitigation options in lieu of purchasing wetland and/or stream credits. The presentation will include an exercise for students to calculate stream and/or wetland impacts using a development plan, determining the amount of compensatory mitigation required, and finding appropriate stream/wetland mitigation banks using the COE/DEQ's RIBITs website.

Thursday, March 11

3:30 – 6:30 pm

P508-21 Automated Vehicle Policy, Planning, and Design

Participants will gain an understanding of trends in the deployment of automated vehicle systems across modes, inclusive of related technologies including connected and electric vehicles with the objective of understanding how these technologies can influence land use, as well as land use planning and urban design in relation to deployment of automated, connected, electric, and shared vehicles. Specific topics will include parking, building codes and curbside management. Students will also learn best practices in future-proofing infrastructure investment in ways that facilitate safe and sustainable deployment of AVs. Specific topics will include planning tools, roadway design questions, connected infrastructure and mobility hubs.

Thursday, March 18

3:30 – 6:30 pm

P509-21 Sustainability and Resilience: Relationship Status? It's Complicated

This class will provide an overview of some popular sustainability accreditation programs. It will look at the respective philosophies, benefits, and drawbacks. Additionally, it will address the relationship between sustainability and resiliency.

Thursday, March 25

3:30 – 6:30 pm

P510-21 Landscapes and Their Value to Community and Land Development

This class will provide an overview in understanding how land development impacts existing landscapes, ecosystems, and communities. Topics planned for discussion include various local and state codes that govern how and what will be preserved, a glimpse into common problems faced by all shareholders in the development process and the tools and processes available to find a viable solution.

Classwork will include a development exercise to create a feasible tree preservation plan.

Thursday, April 8

3:30 – 6:30 pm

**P511-21 Professional Responsibility and Ethics and the 21st Century
Learned Professional**

This course will review professional responsibilities expected of licensed land surveyors and licensed engineers toward their employers, customers, and the public. Using vignettes and case studies, participants will explore various situations that test professional and ethical responsibilities typical of today's work environment. It will also review guidance provided by various professional organizations on these topics as well as a review of regulations promulgated by the Virginia Department of Professional and Occupational Regulation.

Thursday, April 15

3:30 – 6:30 pm

P512-21 Urban Hydrology

Participants in this class will gain a deeper understanding of the following topics planned for inclusion: Natural Resources Conservation Service (NRC)S methods, The Rational method, and The Anderson method.

Thursday, April 22

3:30 – 6:30 pm

**P513-21 Surveys/Deeds/Titles ALTA's - What Do Surveyors Really Do?
Drone Regulations - Not Your Kid's Toy Anymore**

Topics planned for inclusion:

American Land Title Association (ALTA) requirements and regulations.

Drone/Unmanned Ariel Systems (UAS) – rules, regulations, and 3D scanning.

Thursday, April 29

3:30 – 6:30 pm

**P514-21 Geology of the Washington DC Region
An Engineering Perspective**

Topics planned for inclusion: Discussion on general geology, general distribution of geologic units in the region, recent deposits, brief engineering case studies, geologic hazards within the four geologic areas of the state, as well and Karst and seismicity.

Thursday, May 6

3:30 – 6:30 pm

P515-21 Storm Management Plans– Erosion and Sediment Control: Then to Now

By the end of the class, the participants will be able to explain the importance of providing an E&S control plan design from a stormwater management perspective to comply with DEQ Minimum Standard (MS)19, implement the “adequate outfall” approach as one of the most critical elements in the design of an effective E&S control plan and anticipate the need to provide innovative designs to implement control measures to meet MS-19.

Thursday, May 13

3:30 – 6:30 pm

P516-21 Transit Oriented Development - Principles and Practices

By the end of this class, participants will have seen how the proximity of a transit system impacts land development opportunities, understand the elements that comprise a 21st Century Transit Oriented Development (TOD) and identify the various TOD typologies, reviewed how TOD's have evolved from previous suburban development patterns in Fairfax County and reviewed two case studies (Metro West and The Boro). Additionally, participants will have the opportunity to design their own TOD's and complete various hands-on exercises.

Thursday, May 20

3:30 – 6:30 pm

JURISDICTIONAL POLICY & PROCEDURE (P&P) UPDATE CLASSES

County Policy & Procedure (P&P) Update Classes (P600 series)

These classes feature local and state officials who will address the changes to plan design and review policies, regulations, ordinances, and procedures occurring during the past 12 months within their jurisdictions. They may also include information about the types of jurisdictional resources available, Internet links, common mistakes on plans, and unwritten policy practices. DPEs and DPE-eligibles are required to take the classes for all jurisdictions in which they maintain DPE status. **These sessions are typically scheduled in the fall, and members will be notified by email when they are available for enrollment.** (Instructions for enrollment in these classes will be attached.) (P&P Classes do not qualify for credit as PD Electives.)

P611-21 Fairfax County P&P Update Class

P621-21 Loudoun County P&P Update Class

P631-21 Prince William County P&P Update Class

SYMPOSIA & SEMINARS

ESI periodically offers seminars and symposia as rapidly developing opportunities for current technology or process information updates intended to provide responsive access to the membership. They are typically concentrated, fast paced and information distribution oriented, affording members a comprehensive conduit to the latest techniques and requirements surfacing in the land development arena. Members will be notified by email when such classes are available. As information distribution conduits, symposia or seminars may not qualify for credit as a PD Elective.

ALTERNATE EDUCATIONAL OPPORTUNITIES

Some alternate educational opportunities may qualify for credit as PD Electives if appropriate approval, as indicated below, is granted by ESI.

Note: ESI's acceptance of any of the following "Alternate Educational Opportunities" as one of the three annually required PD Electives to maintain DPE status does not guarantee its approval as credit for continuing education in professional license renewal/reinstatement.

Guidelines for Acceptance of an Alternate Educational Activity (other than Class Attendance) for Credit as a PD Elective

(See **P900-20** for information on Participation in an Alternate Class)

Members may (with appropriate ESI approval) receive continuing education credit for an elective under the Professional Development Program by participating in an educational activity (other than class attendance) that meets the following criteria:

1. Has a stated content area, purpose, and observable and measurable objectives
2. Provides for the maintenance, improvement, or expansion of professional skills and knowledge in land development
3. Has an established duration

Members interested in participating in an alternate activity for PD Elective credit should contact the Director of Education for further information before participating. Any alternate educational opportunity tentatively approved for credit as a PD Elective will require the member to submit evidence of successful completion of the activity to the Director of Education before final approval is granted.

P800-21 Participation in a Technical or Process Study

Members may perform study research and coordination regarding a topic identified by the Executive Director. The study shall include a study plan that identifies a statement of objectives, a desired result product, and a work schedule. The study shall have a final report identifying the work process and study results. The member shall provide the format outline for the proposed study to the Executive Director no later than 30 days after enrolling in this class.

P801-21 Participation in a Jurisdiction Support Study

Members participating in support efforts for jurisdictions, as identified by the Executive Director, may enroll in this class. Credit is contingent on meeting product and attendance requirements identified by the Executive Director.

P802-21 ESI Executive Committee

Members of the Executive Committee may enroll in this class. Credit is contingent on meeting product and attendance requirements identified by the Executive Director.

P803-21 Technical Issues Study – Leesburg

Members of the Technical Issues Study -- Leesburg Committee may enroll in this class. Credit is contingent on meeting product and attendance requirements identified by the Executive Director.

P804-21 Education Review Committee

Members of the Education Review Committee may enroll in this class. Credit is contingent on meeting product and attendance requirements identified by the Director of Education.

P805-21 Advisory Plans Examiner Board (APEB)

Members of the Advisory Plans Examiner Board may enroll in this class. Credit is contingent on meeting product and attendance requirements identified by the Executive Director.

P810-21 Engineering Standards Review Committee (ESRC)

Members of the Engineering Standards Review Committee may enroll in this class. Credit is contingent on meeting product and attendance requirements identified by the Executive Director.

P900-21 Participation in an Alternate Class

If a member seeks approval to use participation in an alternate class as credit for one of the three annually required electives to maintain DPE status, the member shall provide the following to the Director of Education, who may refer it to the Education Committee for review:

1. Evidence that the class is from an accredited academic institution or an institution that is state or federally certified as a continuing education credit provider/sponsor.
2. The course description and learning objectives of the alternative class, which shall address a topic comparable to one addressed by ESI classes.
3. If the course is tentatively approved as an acceptable alternate class, the member will also provide evidence of successful completion of the course to the Director of Education before final approval to receive credit is granted.

P910-21 ESI Instruction (ESI Instructors Only)

An ESI instructor who teaches a block of instruction in any of the ESI Education Programs in the current year may enroll in this class. Instructors may enroll in P910 only once per year. Approval by the Director of Education is required.

P920-21 ESI Curriculum Development (ESI Instructors Only)

An ESI instructor who develops a new block of instruction, or substantially updates one, in any of the ESI Education Programs in the current year may enroll in this class. Instructors may enroll in P920 only once per year. Approval by the Director of Education is required.