

# **ENGINEERS & SURVEYORS INSTITUTE**

## **2022 EDUCATION PROGRAMS**

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Dear ESI Colleagues,

Welcome to the 2022 academic year! We hope this finds you healthy and ready to embrace this New Year.

Like the rest of the world we, at ESI, are trying to navigate the ever-evolving pandemic circumstances in which we still find ourselves. Our instructors certainly stepped up to the plate, and we are grateful to have such a wonderful cadre. Please accept our deeply felt thanks.

Please rest assured that during these “interesting” COVID times, we will work together to maintain high safety standards, while still preserving the academic excellence and personalized attention in which ESI prides itself.

In development of our 2022 offerings, we polled our members a few months ago about upcoming classes and preferred delivery methods. You certainly stepped up and offered many suggestions. The results were almost an even mix between those wanting to attend classes in person and those wanting to attend remotely. Considering those results, and in an effort to balance the educational experience with individual health and safety, we are currently planning to offer a hybrid of classes. Based on the type of classroom content being delivered, we are planning to hold some PD classes in person, some remotely, and two classes will be site visits. We believe that this balance of delivery formats will enable our members to make class selections based on their own unique needs and circumstances.

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 happy and healthy year!

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

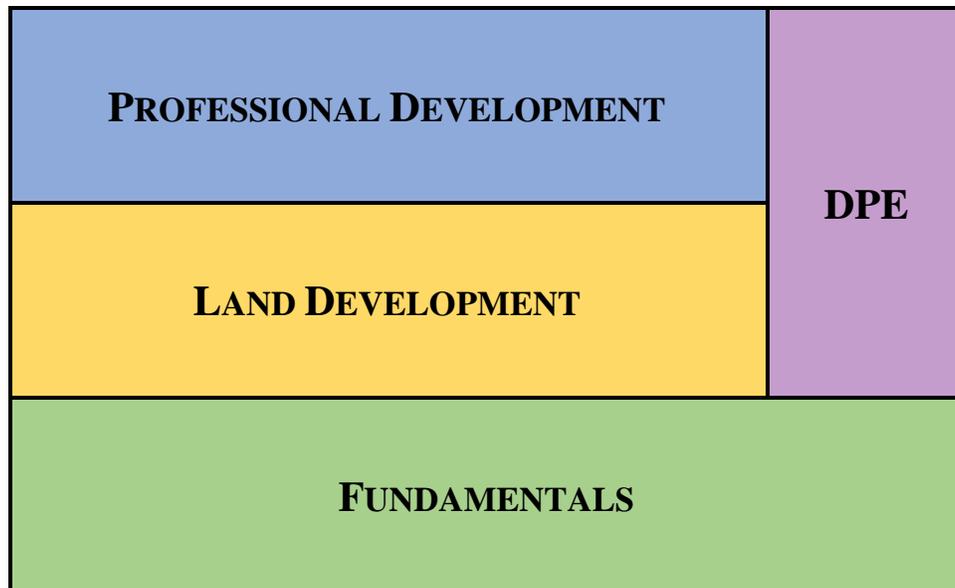
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## **INTRODUCTION TO ESI EDUCATION PROGRAMS**

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 15-17 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 19.)

- **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. Log in to <https://learn.esinova.org>.
2. On the left side, under Dashboard, click Courses.
3. Click the year.
4. Click the class category.
5. Click the class in which you wish to enroll.
6. Click the green Enroll Me button.

You will receive an email confirming your enrollment.

### **To Cancel Enrollment:**

1. Log in 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 usually 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.

## **LDE 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 will 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 Maintain 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>
<b>Fundamental Education Program</b>		
Fundamentals of Land Development in Northern Virginia	\$870	\$1,500
<b>Land Development Engineering Program</b>		
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.*

### **DPE Fees**

One Jurisdiction	\$840	\$1,500
Two Jurisdictions	\$1,080	\$2,000
Three Jurisdictions	\$1,224	\$2,500

**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 2022 classes will be conducted online through the end of March. At that time, we will then reassess the situation. 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 site. Online classes will be conducted via ZOOM.

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.



## 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 ZOOM. 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)**

<b>L101-22</b>	<b>The History of Northern Virginia Land Development</b> Tuesday, January 11, 2022	3:30 – 6:30 pm - <b>Online</b>
<b>L102-22</b>	<b>Evolution of Land Development</b> Tuesday, January 18	3:30 – 6:30 pm - <b>Online</b>
<b>L103-22</b>	<b>Roles &amp; Responsibilities of Key Players</b> Tuesday, January 25	3:30 – 6:30 pm - <b>Online</b>
<b>L104-22</b>	<b>Environmental Issues</b> Tuesday, February 1	3:30 – 6:30 pm - <b>Online</b>
<b>L105-22</b>	<b>Survey Mapping &amp; Subsurface Utility Engineering</b> Tuesday, February 8	3:30 – 6:30 pm - <b>Online</b>
<b>L106-22</b>	<b>Comprehensive Planning &amp; Zoning</b> Tuesday, February 15	3:30 – 6:30 pm - <b>Online</b>
<b>L107-22</b>	<b>Geometric Site Layout I **</b> Tuesday, February 22	3:30 – 6:30 pm - <b>Online</b>
<b>L108-22</b>	<b>Geometric Site Layout II **</b> Tuesday, March 1	3:30 – 6:30 pm - <b>Online</b>
<b>L109-22</b>	<b>Street Design I</b> Tuesday, March 8	3:30 – 6:30 pm - <b>Online</b>
<b>L110-22</b>	<b>Street Design II</b> Tuesday, March 15	3:30 – 6:30 pm - <b>Online</b>
<b>L111-22</b>	<b>Grading &amp; Earthwork</b> Tuesday, March 22	3:30 – 6:30 pm - <b>Online</b>
<b>L112-22</b>	<b>Tree Conservation Plan Preparation</b> Tuesday, March 29	3:30 – 6:30 pm – <b>Online</b>
<b>L113-22</b>	<b>Floodplain Studies</b> Tuesday, April 19	3:30 – 6:30 pm - <b>TBD</b>
<b>L114-22</b>	<b>Drainage Outfalls</b> Tuesday, April 26	3:30 – 6:30 pm - <b>TBD</b>
<b>L115-22</b>	<b>Semester 1 Exam</b> Tuesday, May 3	3:30 – 6:30 pm - <b>TBD</b>

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

**Land Development Engineering – Semester 2 (L200 series)**

<b>L201-22</b>	<b>Storm Drainage Design</b> Tuesday, September 9	3:30 – 6:30 pm
<b>L202-22</b>	<b>Stormwater Planning</b> Tuesday, September 13	3:30 – 6:30 pm
<b>L203-22</b>	<b>Stormwater Management—Quality</b> Tuesday, September 20	3:30 – 6:30 pm
<b>L204-22</b>	<b>Stormwater Management—Quantity</b> Tuesday, September 27	3:30 – 6:30 pm
<b>L205-22</b>	<b>Utilities—Wastewater Design</b> Tuesday, October 4	3:30 – 6:30 pm
<b>L206-22</b>	<b>Utilities—Water Distribution</b> Tuesday, October 11	3:30 – 6:30 pm
<b>L207-22</b>	<b>Erosion &amp; Sediment Control</b> Tuesday, October 18	3:30 – 6:30 pm
<b>L209-22</b>	<b>Site Design Process: Steps &amp; Procedures I **</b> Tuesday, October 25	12:30 – 6:30 pm
<b>L208-22</b>	<b>Utilities—Dry Utilities</b> Tuesday, November 1	3:30 – 6:30 pm
<b>L210-22</b>	<b>Site Design Process: Steps &amp; Procedures II **</b> Tuesday, November 15	12:30 – 6:30 pm
<b>L211-22</b>	<b>Document Production—What &amp; How</b> Tuesday, November 29	3:30 – 6:30 pm
<b>L212-22</b>	<b>Engineer’s/Surveyor’s Roles During Construction</b> Tuesday, December 6	3:30 – 6:30 pm
<b>L213-22</b>	<b>Final Exam Semester 2</b> Tuesday, December 13	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)**

**Date TBD  
9:00 am--4:00 pm**

This one-day course will be presented online (ZOOM) or in the Herrity 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.)

- L310-22**
- 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)**

**Date TBD  
8:30 am--4:30 pm**

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

- L320-22**
- Welcome to Loudoun County, Zoning**
- Legislative Process**
- Subdivision Process**
- Site and Construction Plan Process**
- Bonding Process**
- Expedited Review**

## PROFESSIONAL DEVELOPMENT (PD) PROGRAM

### GENERAL EDUCATION CLASSES (PD ELECTIVES)

#### **P501-22 How to Process Plans and Plats Like a Pro in Loudoun County**

*Instructors: Eric Blankenship, Ronald Dunbar, Zeb Fultz, P.E., Kenneth Williams, P.E.*

This class will cover the ultimate approval process for land development applications in Loudoun County. Items for discussion will include submission and processing requirements for the various applications processed in the Dept. of Building & Development to include the following:

Site Plans (STPL, STMP, REST), Subdivision Plats (SBPL, SBPR, SBRD), Boundary Line Adjustments (BLAD), Road Abandonments (RDAB), Construction Plans & Profiles (CPAP), Revisions (SPAM, CPAR, POCO), Supporting Documents (Including Easement/ROW Dedication Plats, FSM Modification Requests (WAIV), Bond Documents.

This class will also cover typical review timelines, current fee structures, communications standards, and helpful hacks to increase efficiency throughout the plan/plat review process.

**Thursday, January 27**

**3:30 – 6:30 pm - Online**

#### **P502-22 How to Process Plans and Plats Like a Pro in Fairfax County**

*Instructors: TBD*

This class will cover the ultimate approval process for land development applications in Fairfax County. Items for discussion will include submission and processing requirements for the various applications processed in the Dept. of Land Development Services (LDS) to include the following:

Site Plans (SP, MSP), Subdivision Plans & Subdivision Grading Plans, (SD, SDGP), Single-Family Grading Plans (INF, CON) Plats (Record Plat, Easement Plat, Subdivision Plat...) Simple Subdivision (RP) Revisions (SPV, MSPV, SDV...) Floodplain and RPA (FPUD, RPA, WQIA, Exceptions) Supporting Documents (applications, agreements...) Bond Documents.

This class will also cover typical review timelines, current fee structures, communications standards, and tips to increase efficiency throughout the plan/plat review process.

**Thursday, February 10**

**3:30 – 6:30 pm - Online**

**P503-22 Urban Construction (Introductory)**

*Instructors: John Amatetti, P.E., Joe Amatetti, P.E.*

Topics planned for inclusion: Supplemental research and design procedures, precautions and requirements; earth retention systems; construction management and staging in congested areas, constraints on equipment, MOT constraints, construction traffic and haul routes; maintaining existing utility services; identifying easements including existing dry utilities, and clear zone encroachments; new wet and dry utilities for the site; what to incorporate into the construction phasing plan; seasonal challenges and constraints; and collaboration with the contractor and construction manager.

**Thursday, February 17**

**3:30 – 6:30 pm - Online**

**P504-22 Sustainability & Resilience Engineering**

*Instructors: Erik Backus, P.E., LEED AP BD+C, ENV SP, FMP – Clarkson University;  
Brad Glatfelter, P.E. - Bowman*

This course covers key concepts in defining sustainability, resilience, the interaction of the two, vulnerabilities, risk management, robustness, the impacts in design and construction, as well as the approaches to manage uncertainty associated with these topics. This class will provide an overview of some popular sustainability accreditation programs/rating systems; looking at the respective philosophies, benefits, and drawbacks. Participants will develop better knowledge in these areas, enabling them to become better partners, whether in a management, professional, technical, or hands-on role as their respective careers progress.

**Thursday, February 24**

**3:30 – 6:30 pm - Online**

**P505-22 Maintenance for Stormwater Practices – If we build it, can we maintain it?**

*Instructor: Sadie Drescher, VP of Programs for Restoration - Chesapeake Bay Trust*

Topics to be covered in this session include:

- Why maintenance is important to a funding organization and how we are learning better maintenance practices to implement across our portfolio
- For the purposes of this discussion, we will focus on bioretention as a “common currency”
- Hear from experts throughout the Chesapeake Bay for their responses to: What can we do differently today so our stormwater practices are better maintained; What is happening in the industry today? What is working that we can put into practice moving maintenance forward so no BMP is left behind and funding/resources are well allocated?
- We would love to hear from the audience about their experiences, new ideas that work, and things they have tried that do not work (what we should avoid) through an interactive portion(s) of the session.

**Thursday, March 3**

**3:30 – 6:30 pm - Online**

**P506-22 Rise of a Region: A Development History of Northern Virginia**

*Instructor: Andrew A. Painter - Walsh Colucci Lubeley & Walsh, P.C.*

This class will look at the history of the economy and the real estate sector of the NOVA region. It will start with the industries which first developed during the colonial era through the early part of the twentieth century; going in depth into the explosive growth and construction that began in the 1930s; and the acceleration of development after World War II through today. The class will take a comprehensive look at the impacts of changes in infrastructure, transportation, local regulations and land use policies, and the growth of the federal government. Andrew Painter works in the firm’s Land Use and Zoning practice group where he focuses on securing zoning entitlements across northern Virginia including Fairfax County, Loudoun County, the City of Falls Church, the City of Fairfax, and the Town of Leesburg.

**Thursday, March 10**

**3:30–6:3 pm– Online**

**P507-22 Road Design**

*Instructor: Abdul Hammadi, P.E., PMP - VDOT - Sr. Roadway Engineer / Location & Design*

Topics planned for inclusion: Horizontal curves, Superelevation, Vertical curves, Access management (concepts, functional classification, spacing, turn lanes, entrances), Sight distance and AutoTurn Exhibits, Innovative Intersection and Interchange, Lane arrangement (design vehicle, none motorized design users), Size, position, fastest path and alignment of approaches, Geometry design (Inscribed circle, central island, splitter island, and circulatory road), Sight distances, Line and Grade design (horizontal curve, vertical curve), Typical section, Curb Cut Ramp design and ADA compliance (VDOT and PROWAG requirements) (PROWAG : <https://www.access-board.gov/>)

**Thursday, March 17**

**3:30–6:30 pm – Online**

**P508-22 Noman M. Cole Jr., Pollution Control Plant Site Visit**

*Tour Guide: TBD*

*Limit of 30 students*

Noman M. Cole, Jr., Pollution Control Plant. The Noman M. Cole Jr. Pollution Control Plant is an award-winning wastewater treatment plant owned and operated by Fairfax County Government and is located in Lorton, VA

**Thursday, March 24**

**12:00 – 3:00 pm – Site Visit**

**P509-22 Stormwater BMPs - Designing, Building, and Inspecting**  
*Instructor: Jan Briede, Ph.D. - Virginia Dept. of Environmental Quality (DEQ)  
Senior Training Specialist*

A discussion of Virginia's Best Management Practices (BMP's) for dealing with excess stormwater runoff during post construction. By the end of this class, students will be familiar with:

- The most common permitting requirement and submittal, including the Registration Statement, Stormwater Pollution Prevention Plan, Erosion & Sediment and SWM Plan
- Proper BMP design and use
- Requirements for conducting their party inspections
- Common inspection issues encountered in the field and how to avoid them
- The Notice of Termination and termination inspections, including submission of as-builts
- Post construction maintenance and inspections

**Thursday, March 31**

**3:30 – 6:30 pm - Online**

**P510-22 Asset Management Fundamentals**  
*Instructors: Malak Bahrami, P.E., CPPS, Roy De Lauder, CPPM, CF – FFX Co. Gov.*

A successful asset management program hinges on a few fundamental concepts. Although these concepts are the only things that matter, they are essential for accomplishing success. This course goes over the fundamental pieces of an asset management program and why they matter.

**Thursday, April 21**

**3:30 – 6:30 pm – Online**

**P511-22 The ABC's of Infill Lot Grading Plans**

*Instructor: Kayvan Jaboori, P.E. DPE – KJ & Associates*

By the end of this class, students will be familiar with:

- Preparation of existing condition base
- Zoning requirements
- Site layout & proposed grading
- Erosion/Siltation requirements
- Stormwater management requirements
- Building height calculations
- Narratives

**Thursday, April 28**

**3:30 – 6:30 pm – *In Person***

**P512-22 Dry Utilities Design**

*Instructor: Steve Richter, President - Richter & Associates*

In this class, the student will understand requirements of “dry” utility systems (electric, gas, communication, steam) including size of conduits and structures, cover and clearance requirements, and rules of thumb regarding layout of utilities. Students will understand construction techniques for installing these services and coordination required to ensure provision of service to the project. They will also understand the importance of consideration of these systems in order to make better design decisions.

**Thursday, May 5**

**3:30 – 6:30 pm – *In Person***

**P513-22 Focus Group Workshop**

*Facilitator: Sue Wolford, PLA, AICP, LEED Green Associate, ENV SP- Pennoni*

This critical four-hour workshop helps develop ESI's Professional Development curriculum for the next academic year. Under the direction of the Chair of the Education Committee, participants will consider classes suggested by ESI's membership and consolidate them into a prioritized list of courses, identifying class titles, topics to be covered, and subject matter experts. Participants are subject to approval of Director of Education, Education Committee, and/or Executive Director to ensure sufficient knowledge base of ESI curriculum and adequate representation from both the public and private sectors.

**Thursday, May 19 - 9:00 am – 1:00 pm (includes lunch) – In Person**

**P514-22 Site Visit: Tuscarora Creek Flood Mitigation & Stream Restoration**

*Tour guides: Troy Biggs, PE, PH, D.WRE - Renee Lafollette, P.E. – Director of Public Works and Capital Projects, Bill Ackman, P.E.- Town of Leesburg*

This class will provide an understanding the residents' perspectives (make it pretty, make it sustainable so the deer won't eat the plants and will attract wildlife, buy-in), ways to deal with floodplain mitigation, how to stop degradation of an impaired stream, and choosing the right stream restoration tools. DEQ is using this project as a model.

**Thursday, May 26**

**3:30 – 6:30 pm – Site Visit**

**P515-22 Tree Preservation**

*Instructor: Todd Nelson, Urban Forester IV 0 Urban Forest Mgmt. – Fairfax County*

By the end of this class, students will be familiar with:

- Designing to maximize tree preservation
- Avoiding tree pres. deviation request if possible
- Best design practices
- Best Construction practices
- Designing and building to save tress
- Lessons learned

**Thursday, June 2**

**3:30 – 6:30 pm - Online**

## **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.)

#### **P611-22 Fairfax County P&P Update Class**

#### **P621-22 Loudoun County P&P Update Class**

#### **P631-22 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.

#### **P800-22 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.

#### **P801-22 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.

**P802-22 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.

**P803-22 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.

**P804-22 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.

**P805-22 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.

**P810-22 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.

**P900-22 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.

**P910-22 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.

**P920-22 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.