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Courses in land surveying and mapping - minimum 16 credits of PLS classes to sit for initial Land Surveying licensing exam, inc a course in survey law.

Civil Engineering 2018 - 2019 Technical Elective Class List

| Course | Title | Pre-requisite or *Co-requisite Class(es) | Credits | Su2018 | F2018 | W2019 | S2019 |
|--------------------------------------|--|--|---------|--------|-------------------|-----------|-----------|
| CCE 422/522 | Green Building Materials | CCE 321 | 3 | | Ideker (e-campus) | Ideker | |
| CCE 520 (Corrosion) | Selected Topics: Corrosion | Graduate Standing or Instructor Consent | 4 | | | Isgor | |
| CCE 520 (Adv. Concrete Construction) | Special Topics: Advanced Concrete Construction | Graduate Standing or Instructor Consent | 3 | | | Trejo | |
| CCE 523 | Concrete Durability | CCE 321 or CCE 421 | 4 | | | | Ideker |
| CCE 524 | Asphalt Fundamentals | | 4 | | | | Ideker |
| CCE 525 | Construction Site Systems Engineering | Graduate Standing or Instructor Consent | 3 | | | | Gambatese |
| CCE 526 | Design for Safety | Graduate Standing or Instructor Consent | 3 | | Gambatese | | |
| CE 424/524 | Contracts and Specifications | Phase II of Registration with Instructor Consent | 4 | | | | Pestana |
| CE 427/527 | Temporary Construction Structures | CE 383, CE 372, & CCE 321, in Phase II of Registration with Instructor Consent | 4 | | | Gambatese | |
| CEM 341 | Construction Estimating I | CE 102 & CCE 201, in Phase II of Registration with Instructor Consent | 4 | | | | Fradella |

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|--|--|---|---|-------|---------------|---------------|---------|
| CEM 441 | Heavy Civil Construction Management | FE 315 or CE 372, in Phase II of Registration with Instructor Consent | 4 | | | Louis | Pestana |
| CEM 442 | Building Construction Management | Phase II of Registration with Instructor Consent | 4 | | Pestana | | TBA |
| CEM 471 | Electrical Facilities | Phase II of Registration with Instructor Consent | 4 | | Fradella | | |
| CEM 472 | Mechanical Facilities | Phase II of Registration with Instructor Consent | 3 | | | Fradella | |
| CE 365 | Highway Location & Design | CE 361 | 3 | | | Schultz | |
| CE 461/561 | Photogrammetry | CE 361 or CEM 263 or FE 308 (PLS class) | 3 | | Schultz | | |
| CE 463/563 | Control Surveying | CE 361 or CEM 263 or FE 308 (PLS class) | 4 | | | | Schultz |
| CE 465/565 | Oregon Land Survey Law | CE 361 or CEM 263 or FE 308 (PLS class) | 3 | | | Schultz | |
| CE 469/569 | Property Surveys | CE 361 or CEM 263 or FE 308 (PLS class) | 3 | | | | Schultz |
| CE 471 | Foundations for Structures | CE 373 or FE 316 | 3 | | | Khoubani/Ma | |
| CE 482/582 | Masonry Design | CE 481 or equivalent | 3 | | | TBD | |
| CE 484/584 | Wood Design | CE 383 or CE 481 & senior standing | 4 | | | TBD | |
| CE 486/586 | Prestressed Concrete | CE 481 | 3 | | | TBD | |
| CE 492/592 | Pavement Structures | CE 392 | 3 | | | | Coleri |
| CE 413/513 | GIS in Water Resources | Senior Standing & CE 202 or other GIS course | 3 | Arras | | | |
| CE 540 Stochastic Hydrology | Selected Topics: Stochastic Hydrology | Graduate Standing or Instructor Consent | 4 | | Babbar-Sebens | | |
| CE 540 (Storm Water Design & Management) | Selected Topics: Storm Water Design & Management | Graduate Standing or Instructor Consent | 4 | | | Babbar-Sebens | |

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|---|--|--|---|--|-----------|---------|-----------|
| CE 544 (Open Channel Flow) | Open Channel Flow | Graduate Standing or Instructor Consent | 3 | | | Hill | |
| CE 547 | Water Resources Engineering I: Principles of Fluid Mechanics | Graduate Standing or Instructor Consent | 4 | | Istok | | |
| CE 560 (GNSS & Geodesy) | ST: GNSS & Geometric Geodesy | Graduate Standing or Instructor Consent | 4 | | | Park | |
| CE 560 (Adv. Virtual Design & Construction) | ST: Adv. Virtual Design & Construction | Graduate Standing or Instructor Consent | 3 | | | | Turkan |
| CE 560 (Hydrographic Surveying) | Hydrographic Surveying | Graduate Standing or Instructor Consent | 4 | | | | Parrish |
| CE 566 (3D Laser) | 3D Laser Scanning & Imaging | Graduate Standing or Instructor Consent | 4 | | Olsen | | |
| CE 534 | Structural Dynamics | CE 382 & Instructor Consent | 4 | | Simpson | | |
| CE 583 | Bridge Design | CE 481 | 3 | | | | Higgins |
| CE 536 | Matrix Structural Analysis | CE 382 | 4 | | Scott | | |
| CE 589 | Seismic Design | CE 383 or CE 481, and Instructor Consent | 4 | | | Miller | |
| CE 590 (Statistics in Transportation) | Statistics in Transportation | Graduate Standing or Instructor Consent | 3 | | Hernandez | | |
| CE 590 (Agent Based Modeling) | Agent Based Modeling | Graduate Standing or Instructor Consent | 3 | | | Wang | |
| CE 590 (Advanced Traffic Flow Theory) | Advanced Traffic Flow Theory | Graduate Standing or Instructor Consent | 3 | | | Wang | |
| CE 554 | Driving Simulation | CE 595 recommended but not required | 3 | | | Hurwitz | |
| CE 591 | Transportation System Analysis, Planning, & Policy | Graduate Standing or Instructor Consent | 3 | | | | Hernandez |

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|---|--------------------------------|-------------------------------------|---|--|--|-----------------|-----------------|
| CE 594 | Transportation Facility Design | CE 392 | 4 | | | Hunter-Zaworski | |
| CE 597 | Public Transportation | CE 392 | 4 | | | | Hunter-Zaworski |
| WSE 425 | Timber Tectonics Digital Age | N/A - field trip included in course | 4 | | | | Riggio |
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