Electrical and Computer Engineering
Undergraduate Advising Handbook
for
ECE Undergraduate Students

Revision Date: June 6, 2018
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Introduction

The School of Electrical and Computer Engineering (ECE) has compiled this advising handbook for undergraduate students to assist them with the selection of their courses. Students will receive advice throughout their stay at OSU from both faculty and staff. Pre-Professional School students will receive advice from the Pre-Professional School Advisor in CEAT Student Services. Professional School students will receive advice from the ECE Professional School Advisor and from ECE faculty. That advice along with this handbook will help students to complete their degree in a timely and orderly fashion. This handbook is not intended to replace or supersede the official degree sheets for the Bachelor of Science (BS) in Electrical Engineering (BSEE) or the BS in Computer Engineering (BSCpE) degree programs. The student is expected to meet all requirements listed on the official Degree Requirement Sheet corresponding to the year of matriculation.

Each Professional School student is assigned for advisement to an ECE faculty member. That assignment can be found using Banner (https://my.okstate.edu). Students are strongly encouraged to discuss all aspects of the curriculum, career, and technologies of electrical engineering or computer engineering with their faculty adviser. The ECE Professional School Advisor will assist students with non-ECE course selections, prerequisite compliance, degree audit, graduation requirements, and other nuances associated with the ECE programs.

Students pursuing the BS degree in Electrical Engineering are required, prior to graduation, to have taken a set of area courses in a single sub-discipline in ECE. Sub-disciplines include a) communications (Com), control systems, and digital signal processing (DSP), b) power and energy, c) computer and digital, d) electronics and solid state, and e) microwaves and photonics. The set of area courses is listed in this handbook and includes one 3000 level prerequisite course and three 4000 level depth courses. Students are encouraged to select an area that is closely aligned with their career goals. ECE faculty can provide advice about the alignment of career goals with any given area. To facilitate a conversation between BSEE students and faculty, the following list provides a brief overview of each area:

- Communications: wireless technologies, internet, information theory, data networks, encryption, security, digital and analog modulation, encoding and decoding, noise, telecommunications, GPS
- Digital Signal Processing: Machine vision, pattern and voice recognition, speech synthesis, video and image processing, digital filters, analog/digital interfaces, data mining, graphical processors
- Power and Energy: Generation, transmission, electric machines, protection, smart and micro-grids, power electronics, electric drives, electro-mechanical transducers,

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1 Area selection is not needed, or necessarily encouraged, upon entry into Professional School.
sustainability, renewable energy, energy storage, reliability, batteries, energy conversion and transformation

- Computers and Digital: Computer architectures, VLSI design, central and graphical processing units, networking, memory and storage devices, software engineering and coding, embedded controllers, computer arithmetic, internet-of-things, sequential and combinational logic, peripherals
- Electronics and Solid State: Transistors, diodes, semiconductors, microelectronics, transmitters, receivers, amplifiers, mixers, detectors, regulators, mixed-signal devices, filters, operational amplifiers, oscillators, instrumentation, high speed and low power devices, systems-on-a-chip
- Microwaves and Photonics: Radar, lasers, LIDAR, antennas, wireless transmission, fiber optics, THz communications, medical diagnostics and surgery, beamforming, wave scattering, electromagnetic interference, lumped and distributed circuits, optoelectronics, holography, LED’s, photodetectors, imaging systems, spectroscopy

Students pursuing the BS degree in Computer Engineering are by default taking a set of area courses in Computers and Digital along with additional topics in computer science, including discrete mathematics, programming, data structures, and operating systems.

Students also have the option to pursue a dual degree in electrical engineering and computer engineering. This dual degree program requires 136 credit hours to complete (i.e., 12 credit hours beyond the BSCpE program). In principle, it can be completed in four years by taking approximately 17 credit hours each semester.

In addition to the dual degree program, the School also offers a “4+1” program that combines the BSEE or BSCpE program with the School’s Master of Engineering in Electrical Engineering (MEngEE) program. Effectively, this program adds 24 credit hours of graduate courses to the BSEE/BSCpE programs to obtain a BSEE/BSCpE degree and MEngEE degree, thus suggesting that the program requires four years to complete the BSEE/BSCpE degree and one year to complete the MEngEE degree (i.e., “4+1”). Specific details of the “4+1” program can be found on the web in the “Memorandum to Graduate Students”; see https://ece.okstate.edu/.

Students are highly encouraged to discuss the dual and “4+1” programs with their faculty, pre-professional school, and professional school advisers. These value-added programs have been devised to provide students a competitive edge in the workforce by giving them broader and deeper knowledge of the electrical and computer engineering disciplines.

Course advising sheets for the BSEE program, BSCpE program, and the dual degree program are available in this Handbook. Flow charts are also provided to show the flow of all courses for the BS degrees in electrical engineering or computer engineering.
This handbook also lists the 2000, 3000, and 4000 level courses offered by the School along with their corresponding course catalog entries. In most cases, the ECEN course numbering scheme adheres to the following guidelines: ECEN ABXY:

- A = 1 → Freshman Course
- A = 2 → Sophomore Course
- A = 3 → Junior Course
- A = 4 → Senior Course
- A = 5 → Graduate Course
- A = 6 → PhD Course
- B = 1 → Power and Energy
- B = 2 → Computers and Digital Electronics
- B = 3 → Analog Electronics and Solid State
- B = 4 → Control Systems
- B = 5 → Communications
- B = 6 → Microwaves and Electromagnetics
- B = 7 → Signal Processing
- B = 8 → Photonics
- X = 1,2,…,9 for any given course in an area
- Y = Number of credit hours (CH)

For example, ECEN 4613 is a three credit hour, senior level course in the area of microwaves.

A list of the ECE faculty is also provided in this handbook along with their general area of specialization. In general, all faculty will be able to advise any undergraduate student, irrespective of the area of specialization selected by the student. However, students are encouraged to contact any faculty member to get detailed information about any area.
Electrical Engineering (123 CH): Course Advising Sheet

Ia. Pre-Professional School Core Requirement (13 CH): ECEN 2714, ECEN 3233, ENSC 2113, ENSC 3213

Ib. Pre-Professional School Computer Science Requirement (6 CH): CS1113 and either CS 2133 or CS 2433

II. Junior Breadth Requirement (14 CH): ECEN 3314, ECEN 3513, ECEN 3613, ECEN 3714.

III. Area Requirement (12 CH): Choose a set of area courses from columns A, B, C, D, OR E in the table below. An “Area” does not need to be selected upon entering Professional School; an “Area” needs to be completed upon graduation. Substitutions are allowed with ECE approval.

<table>
<thead>
<tr>
<th>Area</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prereq.</td>
<td>ECEN 3723</td>
<td>ECEN 3723 or ECEN 3913</td>
<td>ECEN 3723 or ECEN 3913</td>
<td>ECEN 3913</td>
<td>ECEN 3623</td>
</tr>
<tr>
<td>Depth</td>
<td>ECEN 4413</td>
<td>ECEN 3113</td>
<td>ECEN 4213</td>
<td>ECEN 4313</td>
<td>ECEN 4613</td>
</tr>
<tr>
<td>Depth</td>
<td>ECEN 4523 or ECEN 4533</td>
<td>ECEN 4133</td>
<td>ECEN 4243</td>
<td>ECEN 4353</td>
<td>ECEN 4823</td>
</tr>
<tr>
<td>Depth</td>
<td>ECEN 4763</td>
<td>ECEN 4153</td>
<td>ECEN 4303</td>
<td>ECEN 4413</td>
<td>ECEN 4353 or ECEN 4843</td>
</tr>
</tbody>
</table>

IV. Senior Breadth Requirement (6 CH): Choose any two ECEN 4000 level courses. Exclusions or with ECE approval: ECEN 4010, ECEN 4030. (Other courses, 3000 level or above, in engineering, engineering science, math, physics, chemistry, computer science, or statistics may be allowed with ECE approval.)

V. Controlled Elective (3 CH): Choose a) ENSC 2123, ENSC 2143, or ENSC 2213, b) any ENSC or ENGR course that is 3000 level or above, OR, c) choose any course, 3000 level or above, from ECEN, BAE, MAE, CIVE, IEM, PHYS, MATH, CHEM, STAT, or CS. Exclusions or with ECE approval (and in some cases, approval from other departments):

1 Revision Date: May 26, 2018
• ECEN 4030
• BAE 4001, BAE 4012, BAE 4400
• CHEM 4990
• CIVE 4010, CIVE 4041, CIVE 4043
• CS 3570, CS 4570, CS 4993
• IEM 4010, IEM 4020, IEM 4913, IEM 4931
• MAE 4010, MAE 4342, MAE 4344, MAE 4353, MAE 4354, MAE 4363, MAE 4374
• MATH 3403, MATH 3603, MATH 3910, MATH 3933, MATH 4033, MATH 4590, MATH 4900, MATH 4910
• PHYS 4010, PHYS 4712, PHYS 4993
• STAT 4053, STAT 4063, STAT 4910, STAT 4981, STAT 4991, STAT 4993

VI. Professional School Advanced Engineering Math and Design Requirements (10 CH): ECEN 4503, ECEN 4013, ECEN 4024.
The anticipation at OSU and most institutions of higher education is that for one semester credit hour (SCH) the student spends one hour per week in lecture (two for lab courses) and two hours studying outside of class (one for lab courses). A three credit hour class requires, on average, about nine hours per week. This study plan is recommended for students who will devote full time to university studies and do not have excessive extracurricular activities or other obligations.

**Suggested Course Plan**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>15 Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1113 Comp. Science I</td>
<td>2/2</td>
</tr>
<tr>
<td>ENGR 1111 Intro to Engr</td>
<td>1/1</td>
</tr>
<tr>
<td>CHEM 1414 Gen Chemistry</td>
<td>3/2, Note 1</td>
</tr>
<tr>
<td>MATH 2144 Calculus I</td>
<td>4/0</td>
</tr>
<tr>
<td>ENGL 1113 Freshman Comp I</td>
<td>3/0, Note 2</td>
</tr>
</tbody>
</table>

**Semester 2 | 16 Credit Hours**

| CS 2133 / 2433 Comp. Science II | 3/0, Note 5 |
| PHYS 2014 General Physics I | 3/2, Note 6 |
| MATH 2153 Calculus II | 3/0 |
| ENGL 3323 “H” Elective (3) | Note 3, 7 |

**Semester 3 | 16 Credit Hours**

| ECEN 3233 Digital Logic Des | 2/2 |
| PHYS 2114 General Physics II | 3/2, Note 6 |
| MATH 2233 Diff Equations | 3/0 |
| HIST 1103 American History | 3/0 |

**Semester 4 | 16 Credit Hours**

| ECEN 3314 Intro Device Physics | 2/2 |
| PHYS 3313 General Physics I | 3/0 |
| MATH 2163 Calculus III | 3/0 |
| “S” Elective (3) | Note 3, 7 |

**Prerequisites**

- Only the last prerequisite in a sequence is listed. All earlier prerequisites must also be satisfied before taking the course.

**NOTES:**

1) CHEM 1515 may be substituted for CHEM 1414 and should be taken by all students considering medical school.
2) Students with less than a “B” in ENGL 1113 or 1313 must take ENGL 1213 or 1413 prior to ENGL 3323.
3) A total of at least 6 hours designated “H” and 6 hours designated “S” is required. Of these, 3 hrs must meet the International Dimension “I” component and 3 hrs must meet the Diversity “D” component.
4) ECEN 2714 replaces ENSC 2613 effective fall 2018.
5) CS 2433 may be taken instead of CS 2133.
6) General Physics I and II are key prerequisites and should be taken at the earliest possible time.
7) Must be at least 3 SCH.
8) 3 SCH chosen from the Area (Prereq) Requirement on the EE Course Advising Sheet.
9) 9 SCH during the senior year to meet Area (Depth) Requirement on the EE Course Advising Sheet.
10) 6 SCH during the senior year to meet the Senior Breadth requirement on the EE Course Advising Sheet.
11) 3 SCH during the senior year to meet the Controlled Elective requirement on the EE Course Advising Sheet.
**Professional School Entry Requirements:**

- Completion of at least 60 college level semester credit hours (SCH).
- Completion of at least 12 SCH from OSU.
- Completion of MATH 2144, 2153, 2163, 2233; PHYS 2014 and 2114; CHEM 1414; ENGR 1111; ENSC 2113, 3213; ECEN 2714, 3233; ENGL 1113 or 1313; CS 1113, 2133 or 2433.
- A grade of “C” or better in each of those courses listed above.
- GPA Requirements for Professional School: Technical GPA: 2.70, OSU GPA: 2.60, OSU Technical GPA: 2.70.

- This flowchart is only an advising instrument. When conflicts occur, the official 2018-2019 Degree Requirement Sheet takes precedence. Always check for the most current version of this flowchart.

- Admission to Professional School is required to take upper level ECEN-prefix courses. Please refer to the OSU Catalog corresponding to your matriculation date for detailed admission requirements.
Computer Engineering (124 CH): Course Advising Sheet

Ia. Pre-Professional School Core Requirement (10 CH): ECEN 2714, ECEN 3233, ENSC 3213.

Ib. Pre-Professional School Computer Science Requirement (7 CH): CS1113, CS 2133, CS 2351

II. Junior Breadth Requirement (14 CH): ECEN 3314, ECEN 3513, ECEN 3613, ECEN 3714.

III. Area Requirement (18 CH): ECEN 4213, ECEN 4243, ECEN 4303, CS 3353, CS 3653, CS 4323.

IV. Senior Breadth Requirement (3 CH): Choose one of the following courses: ECEN 4233, ECEN 4273, ECEN 4283.

V. Controlled Elective (3 CH): Choose a) ENSC 2113, ENSC 2123, ENSC 2143, or ENSC 2213, b) any ENSC or ENGR course that is 3000 level or above, OR, c) choose any course, 3000 level or above, from ECEN, BAE, MAE, CIVE, IEM, PHYS, MATH, CHEM, STAT, or CS. Exclusions or with ECE approval (and in some cases, approval from other departments):

- ECEN 4030
- BAE 4001, BAE 4012, BAE 4400
- CHEM 4990
- CIVE 4010, CIVE 4041, CIVE 4043
- CS 3570, CS 4570, CS 4993
- IEM 4010, IEM 4020, IEM 4913, IEM 4931
- MAE 4010, MAE 4342, MAE 4344, MAE 4353, MAE 4354, MAE 4363, MAE 4374
- MATH 3403, MATH 3603, MATH 3910, MATH 3933, MATH 4033, MATH 4590, MATH 4900, MATH 4910
- PHYS 4010, PHYS 4712, PHYS 4993
- STAT 4053, STAT 4063, STAT 4910, STAT 4981, STAT 4991, STAT 4993

VI. Professional School Advanced Engineering Math and Design Requirements (10 CH): ECEN 4503, ECEN 4013, ECEN 4024.
### Suggested Course Plan

The anticipation at OSU and most institutions of higher education is that for one semester credit hour (SCH) the student spends one hour per week in lecture (two for lab courses) and two hours studying outside of class (one for lab courses). A three credit hour class requires, on average, about nine hours per week. This study plan is recommended for students who will devote full time to university studies and do not have excessive extracurricular activities or other obligations.

#### Semester 1

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture/Lab See Note #</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1113</td>
<td>Comp. Science I</td>
<td>2/2</td>
</tr>
<tr>
<td>ENGR 1111</td>
<td>Intro to Engr</td>
<td>1/1</td>
</tr>
<tr>
<td>MATH 2144</td>
<td>Calculus I</td>
<td>4/0</td>
</tr>
<tr>
<td>CHEM 1414</td>
<td>Gen Chemistry</td>
<td>3/2, Note 1</td>
</tr>
<tr>
<td>ENGL 1113</td>
<td>Freshman Comp I</td>
<td>3/0, Note 2</td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture/Lab See Note #</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 2133</td>
<td>Comp. Science II</td>
<td>3/0</td>
</tr>
<tr>
<td>PHYS 2014</td>
<td>General Physics I</td>
<td>2/2, Note 5</td>
</tr>
<tr>
<td>MATH 2153</td>
<td>Calculus II</td>
<td>3/0</td>
</tr>
<tr>
<td>ENGL 3323</td>
<td>Comp. Based Systems</td>
<td>2/2</td>
</tr>
</tbody>
</table>

#### Semester 3

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture/Lab See Note #</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 3233</td>
<td>Digital Logic Des</td>
<td>2/2</td>
</tr>
<tr>
<td>PHYS 2114</td>
<td>General Physics II</td>
<td>3/2, Note 5</td>
</tr>
<tr>
<td>MATH 2233</td>
<td>Diff Equations</td>
<td>3/0</td>
</tr>
<tr>
<td>MATH 2163</td>
<td>Calculus III</td>
<td>3/0</td>
</tr>
</tbody>
</table>

#### Semester 4

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture/Lab See Note #</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 3653</td>
<td>Discrete Math</td>
<td>3/0</td>
</tr>
<tr>
<td>PHYS 3313</td>
<td>Intro Device Physics</td>
<td>3/0</td>
</tr>
</tbody>
</table>

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**NOTES:**

1. CHE 1515 may be substituted for CHEM 1414 and should be taken by all students considering medical school.
2. Students with less than a “B” in ENGL 1113 or 1313 must take ENGL 1213 or 1413 prior to ENGL 3323.
3. A total of at least 6 hours designated “H” and 6 hours designated “S” are required. Of these, 3 hrs must meet the International Dimension “I” component and 3 hrs must meet the Diversity “D” component.
4. ECEN 2714 replaces ENSC 2613 effective fall 2018.
5. General Physics I and II are key prerequisites and should be taken at the earliest possible time.
6. Choose from courses specified on the CpE Course Advising Sheet, section IV.
7. Must be at least 3 SCH.
8. 3 SCH during the senior year to meet the Controlled Elective requirement on the CpE Course Advising Sheet, section V.

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### Prerequisites*

*Only the last prerequisite in a sequence is listed. All earlier prerequisites must also be satisfied before taking the course.

- **OSU Requirement**
- **CEAT Requirement**
- **ECE Requirement**
- **Elective**
Professional School Entry Requirements:

• Completion of at least 60 college-level semester credit hours (SCH).
• Completion of at least 12 SCH from OSU.
• Completion of MATH 2144, 2153, 2163, 2233; PHYS 2014 and 2114; CHEM 1414; ENGR 1111; ENSC 3213; ECEN 2714, 3233; ENGL 1113 or 1313; CS 1113, 2133, 2351.
• A grade of "C" or better in each of those courses listed above.
• An overall GPA of 2.6 or better at OSU.

• GPA Requirements for Professional School: Technical GPA: 2.70, OSU GPA: 2.60, OSU Technical GPA: 2.70.

• This flowchart is only an advising instrument. When conflicts occur, the official 2018-2019 Degree Requirement Sheet takes precedence. Always check for the most current version of this flowchart.

• Admission to Professional School is required to take upper-level ECEN-prefix courses. Please refer to the OSU Catalog corresponding to your matriculation date for detailed admission requirements.
Computer Engineering and Electrical Engineering Dual Degree (136 CH)

Course Advising Sheet

Ia. Pre-Professional School Core Requirement (13 CH): ECEN 2714, ECEN 3233, ENSC 2113, ENSC 3213

Ib. Pre-Professional School Computer Science Requirement (7 CH): CS 1113, CS 2133, CS 2351

II. Junior Breadth Requirement (14 CH): ECEN 3314, ECEN 3513, ECEN 3613, ECEN 3714.


IIIb. Electrical Engineering Area Requirement (12 CH): Choose any four area courses from columns A, B, D, OR, E in the table below. An “Area” does not need to be selected upon entering Professional School; an “Area” needs to be completed upon graduation. Substitutions, except ECEN 32XX and ECEN 42XX (i.e., computer engineering courses), are allowed with ECE approval.

<table>
<thead>
<tr>
<th>Area Prereq</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Depth</td>
<td>Com/Controls/DSP</td>
<td>Power/Energy</td>
<td>Computer/Digital</td>
<td>Electronics/Solid State</td>
<td>Microwaves/Photonics</td>
</tr>
<tr>
<td>Area Depth</td>
<td>ECEN 3723</td>
<td>ECEN 3723 or ECEN 3913</td>
<td>ECEN 3723 or ECEN 3913</td>
<td>ECEN 3913</td>
<td>ECEN 3623</td>
</tr>
<tr>
<td>Area Depth</td>
<td>ECEN 4413</td>
<td>ECEN 3113</td>
<td>ECEN 4213</td>
<td>ECEN 4313</td>
<td>ECEN 4613</td>
</tr>
<tr>
<td>Area Depth</td>
<td>ECEN 4523 or ECEN 4533</td>
<td>ECEN 4133</td>
<td>ECEN 4243</td>
<td>ECEN 4353</td>
<td>ECEN 4823</td>
</tr>
<tr>
<td>Area Depth</td>
<td>ECEN 4763</td>
<td>ECEN 4153</td>
<td>ECEN 4303</td>
<td>ECEN 4413</td>
<td>ECEN 4353 or ECEN 4843</td>
</tr>
</tbody>
</table>

IVa. Computer Engineering Senior Breadth Requirement (3 CH): Choose one of the following courses: ECEN 4233, ECEN 4273, ECEN 4283.

IVb. Electrical Engineering Senior Breadth Requirement (6 CH): This requirement is automatically satisfied by the requirements listed in Section IIIa.
Va. Computer Engineering Controlled Elective (3 CH): This requirement is automatically satisfied by the requirements listed in Section Ia (i.e., ENSC 2113).

Vb. Electrical Engineering Controlled Elective (3 CH): This requirement is automatically satisfied by the requirements listed in Section IIIa or IVa.

VI. Professional School Advanced Engineering Math and Design Requirements (10 CH): ECEN 4503, ECEN 4013, ECEN 4024.
ECEN Courses for the BSEE and BSCpE Degrees

- ECEN 2714 - Fundamentals of Electric Circuits
- ECEN 3113 - Energy, Environment and Economics
- ECEN 3233 - Digital Logic Design
- ECEN 3314 - Electronic Devices and Applications
- ECEN 3513 - Signal Analysis
- ECEN 3613 - Electromagnetic Fields
- ECEN 3623 - Mathematical Foundations of Electromagnetics and Photonics
- ECEN 3714 - Network Analysis
- ECEN 3723 - Systems I
- ECEN 3903 - Introduction to Semiconductor Devices
- ECEN 3913 - Solid State Electronic Devices
- ECEN 4013 - Design of Engineering Systems
- ECEN 4024 - Capstone Design
- ECEN 4133 - Power Electronics
- ECEN 4153 - Power System Analysis and Design
- ECEN 4213 - Embedded Computer Systems Design
- ECEN 4233 - High Speed Computer Arithmetic
- ECEN 4243 - Computer Architecture
- ECEN 4273 - Software Engineering
- ECEN 4283 - Computer Networks
- ECEN 4303 - Digital Integrated Circuit Design
- ECEN 4313 - Linear Electronics Circuit Design
- ECEN 4353 - Communication Electronics
- ECEN 4413 - Automatic Control Systems
- ECEN 4503 - Random Signals and Noise
- ECEN 4523 - Communication Theory
- ECEN 4533 - Data Communications
- ECEN 4613 - Microwave Engineering
- ECEN 4703 - Active Filter Design
- ECEN 4743 - Introduction to Biomedical Engineering Modeling and Systems
- ECEN 4763 - Introduction to Digital Signal Processing
- ECEN 4773 - Real Time Digital Signal Processing
- ECEN 4823 - Design of Optical Systems
- ECEN 4843 - Design of Lasers and Systems
Catalog Entries

Select the Course Number to get further detail on the course. Select the desired Schedule Type to find available classes for the course.

**ECEN 2111 - Experimental Methods I**

Basic electrical measurements and instrumentation techniques and devices. Use of voltmeters, ammeters, oscilloscopes, impedance bridges to study resistive, inductive, and capacitive circuit elements in steady state and transient operation. Reinforces ENSC 2113 and introduces design of instrumentation networks. Serves as introduction for non-majors. Previously offered as ECEN 3913. Prerequisite(s): PHYS 2114, Co-requisite(s): ENSC 2113.

1.000 Credit hours
2.000 Lab hours

*Levels: Undergraduate*

*Schedule Types: Lab*

Elect & Computer Engr Department

*Course Attributes:*
College of Eng Arch & Tech, Lower Division Requirement

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**ECEN 2714 - Fundamentals of Electric Circuits**

Circuit analysis techniques including equivalent networks and mesh/node formulation of network equations; operational amplifiers, RL, RC and RLC transient and steady-state circuit analysis; energy and power; electrical measurements and instrumentation. Prerequisite(s): MATH 2153 and PHYS 2114.

4.000 Credit hours
3.000 Lecture hours
2.000 Lab hours

*Levels: Undergraduate*

*Schedule Types: Lab, Lecture, Combined lecture and lab*

Elect & Computer Engr Department

*Course Attributes:*
College of Eng Arch & Tech, Lower Division Requirement

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**ECEN 3020 - Supervised Research Project**

Supervised research project for qualified students. May be repeated no more than three times for a total of three credit hours. Offered for variable credit. 1-3 credit hours, maximum of 3 credit hours. Prerequisite(s): Consent of Instructor and ECEN department head.

1.000 Credit hours
1.000 Other hours

*Levels: Undergraduate*

*Schedule Types: Independent Study*

Elect & Computer Engr Department

*Course Attributes:*
College of Eng Arch & Tech, Upper Division Requirement

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**ECEN 3113 - Energy, Environment and Economics**

Topics relevant to understanding the close relationship between energy use, its impact on the environment, and overall economic implications. Green energy technologies (wind, solar, hydropower) will be considered along with conventional techniques. Both conventional and non-conventional energy technologies will be discussed. Prerequisite(s): ECEN 3714, degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

*Levels: Undergraduate*

*Schedule Types: Lecture*

Elect & Computer Engr Department

*Course Attributes:*
College of Eng Arch & Tech, Upper Division Requirement

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**ECEN 3233 - Digital Logic Design**


3.000 Credit hours
2.000 Lecture hours
2.000 Lab hours

*Levels: Undergraduate*

*Schedule Types: Lab, Lecture, Combined lecture and lab*

Elect & Computer Engr Department

*Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3314 - Electronic Devices and Applications**

Semiconductor electronic components including MOSFETs, BJTs, JFETs, and OpAmps. Emphasis on device models and use of solid state electronic devices to analyze, synthesize and design amplifiers and switching circuits. Spice simulations are extensively utilized. Basic building blocks for analog and digital applications. Theoretical concepts and methods are demonstrated and reinforced through laboratory exercises. Course previously offered as ECEN 3313. Prerequisite(s): ECEN 2714. Degree program requires admission to Professional School prior to enrollment.

4.000 Credit hours
3.000 Lecture hours
2.000 Lab hours

**Levels:** Undergraduate

**Schedule Types:** Lab, Lecture, Combined lecture and lab

Elec & Computer Engr Department

**Course Attributes:**
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3513 - Signal Analysis**

Degree program requires admission to Professional School prior to enrollment. Deterministic signals. Fourier series and Fourier transforms. Impulse response, convolution and correlation. Sampling theorem. Analog modulation techniques. Prerequisite(s): ECEN 2714

3.000 Credit hours
3.000 Lecture hours

**Levels:** Undergraduate

**Schedule Types:** Lecture

Elec & Computer Engr Department

**Course Attributes:**
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3613 - Electromagnetic Fields**

Time-harmonic and transient response of transmission lines. Maxwell's equations and their applications to engineering problems in electrostatics, magnetostatics, time-harmonic fields and plane wave propagation. Prerequisite(s): ENSC 2714 with a minimum grade of "C" or better, MATH 2163 and MATH 2233.

3.000 Credit hours
3.000 Lecture hours

**Levels:** Undergraduate

**Schedule Types:** Lecture

Elec & Computer Engr Department

**Course Attributes:**
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3623 - Mathematical Foundations of Electromagnetics and Photonics**

Mathematical and computational treatment of fundamental electromagnetic theory, with applications to microwave engineering, photonics and semiconductor design. Energy and power, Lagrange and Poisson equations; wave equation, including reflection, refraction, and diffraction; and classical electromagnetic radiation at macroscopic and microscopic levels. Prerequisite(s): ECEN 3613 and degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
2.000 Lecture hours
2.000 Lab hours

**Levels:** Undergraduate

**Schedule Types:** Lab, Lecture, Combined lecture and lab

Elec & Computer Engr Department

**Course Attributes:**
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3714 - Network Analysis**

Laplace transform, transfer functions, magnetically coupled circuits and two-port networks. Theoretical concepts and methods are demonstrated and reinforced through laboratory exercises. Course previously offered as ECEN 3713. Prerequisite(s): ECEN 2714 with a minimum grade of "C" or better and MATH 2233.

4.000 Credit hours
3.000 Lecture hours
2.000 Lab hours

**Levels:** Undergraduate

**Schedule Types:** Lab, Lecture, Combined lecture and lab

Elec & Computer Engr Department

**Course Attributes:**
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3723 - Systems I**

Physical and mathematical modeling of electrical and mechanical dynamic systems. Transient response of first and second order systems. Laplace transform techniques for solving differential equations, transfer functions, frequency response and resonance. Course previously offered as ECEN 3413. Prerequisite(s): ENSC 2113 and ENSC 2714 with a minimum grade of "C" or better, and MATH 2233.

3.000 Credit hours
3.000 Lecture hours

**Levels:** Undergraduate

**Schedule Types:** Lecture

Elec & Computer Engr Department

**Course Attributes:**
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3903 - Introduction to Semiconductor Devices**

Crystal structure, the quantum theory of solids. The physics of semiconductor materials and the junction, with an emphasis on applications to semiconductor devices. Same course as PHYS 3313.
Prerequisite(s): PHYS 2114 or equivalent.
3.000 Credit hours
3.000 Lecture hours

Levels: Undergraduate
Schedule Types: Lecture
Elec & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 3913 - Solid State Electronic Devices**

Solid state physics basis of modern electronic devices. Introductory quantum mechanics. Energy bands in solids. Electronic properties of semiconductors. Junction diodes, bipolar transistors, field effect transistor. Prerequisite(s): UCEN 2714 with a minimum grade of "C" or better and either PHYS 3313 or ECEN 3903. Degree program requires admission to Professional School prior to enrollment.
3.000 Credit hours
3.000 Lecture hours

Levels: Undergraduate
Schedule Types: Lecture
Elec & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 4010 - Technical Problems and Engineering Design**

Individual independent study projects selected in consultation with the instructor. Analysis or design problems, literature searches and computer simulations may be involved. Offered for variable credit, 1-12 credit hours, maximum of 12 credit hours. Prerequisite(s): Consent of instructor.
1.000 TO 12.000 Credit hours
1.000 TO 12.000 Other hours

Levels: Graduate, Undergraduate
Schedule Types: Independent Study
Elec & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 4013 - Design of Engineering Systems**

Complete design cycle for several small design projects, each including establishing objectives, synthesis, analysis, construction, testing and evaluation. Use of modern lab equipment and fabrication techniques. Development of communication skills. Prerequisite(s): ECEN 3913, ECEN 3714, ECEN 3314, ECEN 3333 and ENSC 3213. ENGI 3303 as co-requisites. Degree program requires admission to professional school prior to enrollment.
3.000 Credit hours
1.000 Lecture hours
4.000 Lab hours

Levels: Undergraduate
Schedule Types: Lab, Lecture, Combined lecture and lab
Elec & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 4024 - Capstone Design**

Continuation of ECEN 4013. Student project teams design, build, test and present results for realistic projects from university and industrial sponsors. Formulation of specifications, consideration of alternative solutions, feasibility considerations, detailed system descriptions, economic factors, safety, reliability, aesthetics, ethics and social impact. Course previously offered as ECEN 4024. Prerequisite(s): ECEN 4013; degree program requires admission to Professional School prior to enrollment.
4.000 Credit hours
3.000 Lecture hours
2.000 Lab hours

Levels: Undergraduate
Schedule Types: Lab, Lecture, Combined lecture and lab
Elec & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

**ECEN 4030 - Undergraduate Professional Practice**

Experience in application of electrical engineering principles to typical problems encountered in industry. Solutions to the problems by student participation in the role of engineer or engineering intern. Offered for variable credit, 1-8 credit hours, maximum of 8 credit hours. Prerequisite(s): Approval of ECEN department head.
1.000 TO 8.000 Credit hours
1.000 TO 8.000 Other hours

Levels: Undergraduate
Schedule Types: Independent Study
Elec & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Internship or Practicum, Eligible for SAFW, Upper Division Requirement
ECEN 4133 - Power Electronics

Power electronic devices, components, and their characteristics; DC to AC conversion; fundamentals of inverters and waveshaping devices; application aspects; control aspects; characteristics and state of the art of advanced power inverter and power conditioning topologies. Prerequisite(s): Degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elec & Computer Engr Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4153 - Power System Analysis and Design

Power system component models from circuit theory. Formulation and design of the load flow model and the optimum economic generator allocation problems utilizing computer methods. Prerequisite(s): Degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elec & Computer Engr Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4213 - Embedded Computer Systems Design

Degree program requires admission to Professional School prior to enrollment. Design of microcontroller-based systems through proper integration of hardware and software. Serial and parallel communications, sensor interfacing, computer control of external devices, and color graphics hardware. Design of PASCAL and assembly language modules for optimum real-time system performance. Prerequisite(s): ENSC 3213 and CS 1113.

3.000 Credit hours
2.000 Lecture hours
2.000 Lab hours

Levels: Graduate, Undergraduate
Schedule Types: Lab, Lecture, Combined lecture and lab

Elec & Computer Engr Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4223 - High Speed Computer Arithmetic

Course covers computer arithmetic as applied to general purpose and application-specific processors. Focus is on developing high-speed arithmetic algorithms and understanding their implementation in VLSI technology at the gate level. Prerequisite(s): ECEN 3223; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elec & Computer Engr Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4243 - Computer Architecture

Degree program requires admission to Professional School prior to enrollment. Functional organization and hardware design of digital computer systems with emphasis on microprocessor-based systems. CPU organization, features of microprocessors including advanced 32-bit CPUs, memory system design including cache, virtual memory, error detection and correction, I/O operations, including direct memory access and peripheral interface design. Prerequisite(s): ENSC 3213 and ECEN 4223.

3.000 Credit hours
2.000 Lecture hours
2.000 Lab hours

Levels: Graduate, Undergraduate
Schedule Types: Lab, Lecture, Combined lecture and lab

Elec & Computer Engr Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4273 - Software Engineering

Degree program requires admission to Professional School prior to enrollment. Functional organization and hardware design of digital computer systems with emphasis on microprocessor-based systems. CPU organization, features of microprocessors including advanced 32-bit CPU's memory system design including cache, virtual memory, error detection and correction, I/O operations, including direct memory access and peripheral interface design. Same course as CS 4273. Prerequisite(s): ENSC 3213 or CS 1113, CS 3433.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elec & Computer Engr Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement
ECEN 4283 - Computer Networks

Degree program requires admission to Professional School prior to enrollment. Computer networks, distributed systems and their systematic design, introduction to the use, structure, and architecture of computer networks. Networking experiments to describe network topology, OSI reference model. Same course as CS 4283. Prerequisite(s): ENSC 3213 or CS 3943.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Type: Lecture

Elec & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4303 - Digital Integrated Circuit Design

Theory of digital and electronics circuits. Digital logic families TTL, IIL, ECL, NMOS, CMOS, GaAs. Large signal models for transistors. Implementation of RAM and ROM. Circuit design for LS and VLSI. Prerequisite(s): ECEN 3233 and ECEN 3714; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Type: Lecture

Elec & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4313 - Linear Electronics Circuit Design

Class A and B, small-signal, push-pull power, complementary symmetry, differential and operational amplifiers, utilizing field-effect transistors, bipolar transistors, tunnel diodes and integrated circuits. Emphasis on amplification in electronic devices, design and analysis of wide-band amplifier circuitry. Prerequisite(s): ECEN 3714; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Type: Lecture

Elec & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4353 - Communication Electronics

Design of tuned voltage and power amplifiers, oscillators and mixers, modulation and detection, and parametric amplifiers. Prerequisite(s): ECEN 3714; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Type: Lecture

Elec & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4413 - Automatic Control Systems

Properties of feedback control systems, mathematical models of basic components, state-variable models of feedback systems, time-domain analysis, stability, transform analysis, frequency domain techniques, root locus design of single input single output systems and single compensation techniques. Same course as MAE 4058. Prerequisite(s): ECEN 3728 or MAE 3728; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Type: Lecture

Elec & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4503 - Random Signals and Noise

Analysis of electrical systems using elementary concepts of probability, random variables and random processes. Frequency and time domain response of linear systems driven by random inputs. Statistical properties of electrical noise. Analysis and design of optimum linear systems. Prerequisite(s): ECEN 3513, ECEN 3714; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Type: Lecture

Elec & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4523 - Communication Theory
Noise in modulation systems. Digital data transmission. Design of optimal receivers. Introduction to information theory. Prerequisite(s): ECEEN 3513 and ECEEN 4503. Degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elect & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4533 - Data Communications

Degree program requires admission to Professional School prior to enrollment. Signal detection in noise. Tradeoffs between bandwidth signal-to-noise ratio and rate of information transfer. Transmission multiplexing and error handling. Elements of computer network design. Data link protocols. Prerequisite(s): ECEEN 4503 as co-requisite.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elect & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4613 - Microwave Engineering

Aspects of propagation, transmission, and radiation of microwave energy. Plane wave propagation; lossless and lossy media, reflection, refraction, and polarization. Transmission line theory: lumped element model, characteristic impedance, impedance matching, and transient response. Theory of waveguides and cavity resonators. Microwave network theory and S-parameters. Introduction to radiating systems. Prerequisite(s): ECEEN 3513; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elect & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4703 - Active Filter Design

Introduction to passive filters; operational amplifiers as network elements; filter specifications; design of active filters. Laboratory design projects and computer simulations. Prerequisite(s): ECEEN 3513; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elect & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4743 - Introduction to Biomedical Engineering Modeling and Systems

An overview of the field of biomedical engineering and an introduction of the modeling approaches implemented in biomedical engineering. Topics include bio-electronics, biomechanics, compartmental modeling, bio-signal processing, biomedical optics, etc. The course will demonstrate a few of major fields of activity in which biomedical engineers are engaged and modeling approaches are implemented. Prerequisite(s): ECEEN 3714, ECEEN 4763; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elect & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4763 - Introduction to Digital Signal Processing

Introduction to discrete linear systems using difference equations and z-transforms. Discrete Fourier analysis. Design of digital filters. Sampling theorem. Applications of digital signal processing. Prerequisite(s): ECEEN 3513; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours

Levels: Graduate, Undergraduate
Schedule Types: Lecture

Elect & Computer Engr Department

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4773 - Real Time Digital Signal Processing

DSP: Processor architectures and programming, A/D, D/A, polled and interrupt-driven I/O, Realtime implementation of FIR/IER filters, the FFT, and other DSP algorithms on special purpose DSP hardware from Motorola, Texas Instruments and others. Link between DSP theory and practical implementation. Prerequisite(s): ECEEN 4763 or equivalent; degree program requires admission to Professional School prior to enrollment.
ECEN 4823 - Design of Optical Systems

Introduction to optics through the design, construction, and characterization of optical systems. Emphasis on geometrical optics and spectroscopy. Course previously offered as ECEN 3873. Prerequisite(s): PHYS 2114; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
3.000 Lecture hours
2.000 Lab hours

Levels: Graduate, Undergraduate
Schedule Types: Lab, Lecture, Combined lecture and lab

Elect & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

ECEN 4843 - Design of Lasers and Systems

Introduction of the design of lasers and optical systems based on lasers including the design, construction, and characterization of lasers. Gaussian beams and optics, laser gain materials, laser cavities, advanced optics. Course previously offered as ECEN 4813. Prerequisite(s): ECEN 3613; degree program requires admission to Professional School prior to enrollment.

3.000 Credit hours
2.000 Lecture hours
2.000 Lab hours

Levels: Graduate, Undergraduate
Schedule Types: Lab, Lecture, Combined lecture and lab

Elect & Computer Engr Department:

Course Attributes:
College of Eng Arch & Tech, Upper Division Requirement

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### Fall Final Examination Schedule

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<th>DAY OF EXAM</th>
<th>TIME OF THE EXAMINATION</th>
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**Common Finals**

- **Tuesday, December 11**: Classes and MATH 1613 MW 2:30
- **Wednesday, December 12**: Classes and MATH 1483 Early Evening
- **Thursday, December 13**: Classes and MATH 1513

In the event that a student has three or more final exams scheduled for a single day, the student can request rescheduling.

Final Exam Schedule subject to change, always check with your instructor.

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### Graduation in December?

You must file a graduation application by Thursday, November 1 to have your name appear in the fall commencement program. Log in to my.okstate.edu, Self Service, and select ‘Apply to Graduate’ from the Student Records menu.
Students’ Rights to Privacy

The Family Educational Rights and Privacy Act of 1974 (Buckley Amendment) was designed to protect the privacy of educational records, to establish the right of students to inspect and review their educational records in all offices, and to provide guidelines for the correction of inaccurate or misleading data through informal hearings.

An OSU student has the right to:
1. Inspect and review information contained in his or her educational records within 45 days of the day that the University receives a written request from the student.
2. Challenge the contents of the educational record.
3. Have a hearing if the outcome of a challenge is unsatisfactory.
4. Submit an explanatory statement for inclusion in the educational record, if the outcome of the hearing is unsatisfactory.
5. Secure a copy of the educational record, which includes the location of all educational records.
6. Prevent disclosure, with certain exceptions, of personally identifiable information from the educational record.
7. File a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202-5901.

Withholding Disclosure of Information.
Currently enrolled students may withhold disclosure of their educational records. A student may request a written request with the Office of the Registrar to not release personally identifiable information, including directory information until revoked by the student in writing.

The University assumes that the file of a particular student is confidential. A student cannot be compelled to release personally identifiable information through a written request.

Access to Records.
Students may inspect and review their educational records by making a written request to the office that maintains the records (See Access of Records below). Non-directory information regarding students’ educational records may be disclosed to anyone without written consent of the student, except for selected purposes as authorized by federal law, such as to "school officials who have legitimate educational interest both in students who are currently enrolled and in students who seek or intend to enroll or are already enrolled if the disclosure is related to the student’s enrollment or transfer, and in response to a lawfully issued court order or subpoena.

Parental Access to Records.
At the postsecondary level, parents have no inherent right to inspect their child or daughter’s educational records. Information regarding educational records is obtained by direct communication between the parent and the student. Students may consent to release their educational records to parents, legal guardians, or other individuals by completing the appropriate form in the Office of the Registrar. Students may use the form in a non-confrontational environment. Parents of a dependent student may challenge denial of access to educational records by presenting the results of the challenge to the Office of the Registrar. If the challenged record is not part of the student’s education record, the student must provide written consent.

Definitions.
"Educational Record" refers to those records which are directly related to a student and are maintained by an educational institution.

"Directory Information" includes the student’s name; local and permanent address or hometown; telephone number; year of birth; major field of study; weight and height of student; participation in officially recognized sports; dates of attendance at Oklahoma State University; degrees, honors, and awards granted or received and dates granted or received; officially recognized status such as freshman, sophomore, junior, senior, etc.; institutional electronic mail address; most recent educational institution previously attended; dissertation or thesis title; adviser or thesis director; participation in officially recognized organizations, activities, and sports; parents’ names and addresses (city and state only).

"School official" is defined as an individual currently serving as a member of the Oklahoma State University Board of Regents or classified as faculty, administrative or professional, and staff such school officials supervise; the President and CEO of the Alumni Association; the President of Oklahoma State University Foundation and the staff they supervise; the National Student Clearinghouse; and contractors, vendors, or students performing institutional functions as school officials with legitimate educational interests.

Legitimate educational interest is an interest which results from the duties officially assigned to a school official and which are related to such a school’s official responsibilities for facilitating the student’s development. School officials may have legitimate educational interests both in students who are currently enrolled and in those no longer enrolled.

Location of Records. Several office shares responsibility for maintaining and releasing information pertaining to student education records. These include, but are not restricted to: a) the Office of the Registrar for academic records; b) Student Conduct Education and Administration office for disciplinary records; c) the Office of the Bureau of Billing and payment records, d) the Office of Scholarships and Financial Aid for scholarship and financial aid records, and e) the Human Resources office on Career Services office for employment/placement records, and f) the Communications Service office for directory information.

Registration and Enrollment
1. Find your expected enrollment/registration date for the upcoming semester in this enrollment guide.
2. Schedule a meeting with your academic adviser to plan your class schedule. You won’t be able to enroll until your adviser agrees you for registration. Contact your adviser early, as advising appointments fill quickly.
3. From Student Self Service, check. Prepare for Registration (under Registration) to verify if you are eligible to register for classes. This site will notify you of factors that may prevent you from being eligible to register, such as holds. You can also view your registration time ticket details here (once it’s been assigned in early March) and registration permits/overrides that have been granted to you.
4. If you browse for classes, be sure to click the class title to access current prerequisites and other class restrictions that may prevent you from registering.
5. You can plan your schedule in Self Service using Plan Ahead under the Registration menu. Plans created here will be available when you register for classes (on the Plans tab).
6. If you register in a class with variable credit hours, it will default to the lowest number of credit hours. Use the Schedule and Options tab of Registration to change credit hours in a variable class. Detailed instructions can be found in registrar.okstate.edu/XE.Registration/change.
7. Find more details on Self Service Registration at registrar.okstate.edu/XE.Registration.
8. Find instructions for viewing your class schedule in various ways at registrar.okstate.edu/content/viewing-my-class-schedule.

Tulsa-based sections have a different common evening exam and most current Evening Common Exam and Final Exam Schedule information.

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<td>MATH 2144</td>
<td>Sep 18, Oct 16, Nov 13</td>
</tr>
<tr>
<td>MSIS 3223</td>
<td>Sep 25, Oct 30</td>
</tr>
<tr>
<td>PHYS 1114</td>
<td>Sep 18, Oct 16, Nov 13</td>
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<tr>
<td>PHYS 1214</td>
<td>Sep 20, Oct 18, Nov 15</td>
</tr>
<tr>
<td>PHYS 2114</td>
<td>Sep 17, Oct 15, Nov 12</td>
</tr>
<tr>
<td>PHYS 2118</td>
<td>Sep 19, Oct 17, Nov 14</td>
</tr>
</tbody>
</table>

Course Schedule

Students who wish to enroll in a course must enroll before the start of the course. Proportionate drop and withdraw dates are applicable to block and closed classes. Go to registrar.okstate.edu and click on ‘Short Courses with Unique Drop/Add Deadlines’ link for these deadlines or scan this QR code below:

Examination schedules in this guide are subject to change. Check registrar.okstate.edu/Exams or scan the QR code on the front for the most current Evening Common Exam and Final Exam Schedule information.

Building Designations

Campus Map

New Furniture

Furniture for use by students and faculty in public areas, such as student centers, hallways, kitchens, and meeting rooms.

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