

# Equity and Justice UCORE: Summary of Catalog Updates

College of Engineering and Architecture (no. 1)

Faculty Senate approved January 19, 2023

Summary of Catalog Updates for:

**Chemical Engineering and Bioengineering; Design and Construction; Electrical Engineering and Computer Science; Engineering and Computer Sciences (Vancouver); Mechanical and Materials Engineering**

The following schedules of studies reflect the updates to the *WSU Catalog* 4-year plans in response to the new Equity and Justice [EQJS] UCORE designation. The updates have been reviewed and approved by the respective departments and college leadership. The effective date is fall 2023 for incoming students.

The departments listed in this summary bulletin will require students to complete 6 of 7 UCOREs in these designations: ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI, including one lab science (BSCI or PSCI). The other UCORE requirements have not changed.

For the purpose of this summary document, the 7 UCORE designations are listed at the top of each schedule as a set and are highlighted as follows:

- Teal highlighting calls out any course that is a specified UCORE course (e.g., CHEM 101) that fulfills both a UCORE and major requirement.
- Yellow highlighting indicates a UCORE designation from which students will choose in order to fulfill the 6 of 7 requirement (e.g., “Arts [ARTS]” becomes “UCORE Inquiry”).
- The “UCORE Inquiry” footnote lists the courses from which students choose to complete the UCORE requirement.

ADVISORY NOTE: The updates below do not reflect any requirement changes that are in process for next year’s catalog. Any requirement changes will be updated with the EQJS information once approved.

Department	Summary of updated schedules of studies for EQJS														
<p><b>Chemical Engineering and Bioengineering</b></p>	<p><b>Bioengineering – General Option (120 Credits)</b>  <b>ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI</b></p> <p>Teal highlight represents a specified UCORE course from the set.            Yellow highlight represents an open/elective UCORE course.</p> <p><b>First Year</b></p> <table border="0"> <thead> <tr> <th data-bbox="456 1591 1398 1629"><i>First Term</i></th> <th data-bbox="1403 1591 1515 1629"><i>Credits</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="456 1635 1398 1673">Arts [ARTS]</td> <td data-bbox="1403 1635 1515 1673">3</td> </tr> <tr> <td data-bbox="456 1680 1398 1717">UCORE Inquiry<sup>2</sup></td> <td data-bbox="1403 1680 1515 1717">3</td> </tr> <tr> <td data-bbox="456 1724 1398 1761">CHEM 105 [PSCI]</td> <td data-bbox="1403 1724 1515 1761">4</td> </tr> <tr> <td data-bbox="456 1768 1398 1806">ENGLISH 101 [WRTG]</td> <td data-bbox="1403 1768 1515 1806">3</td> </tr> <tr> <td data-bbox="456 1812 1398 1850">ENGR 120<sup>1</sup></td> <td data-bbox="1403 1812 1515 1850">2</td> </tr> <tr> <td data-bbox="456 1856 1398 1894">MATH 171 [QUAN]</td> <td data-bbox="1403 1856 1515 1894">4</td> </tr> </tbody> </table>	<i>First Term</i>	<i>Credits</i>	Arts [ARTS]	3	UCORE Inquiry <sup>2</sup>	3	CHEM 105 [PSCI]	4	ENGLISH 101 [WRTG]	3	ENGR 120 <sup>1</sup>	2	MATH 171 [QUAN]	4
<i>First Term</i>	<i>Credits</i>														
Arts [ARTS]	3														
UCORE Inquiry <sup>2</sup>	3														
CHEM 105 [PSCI]	4														
ENGLISH 101 [WRTG]	3														
ENGR 120 <sup>1</sup>	2														
MATH 171 [QUAN]	4														

<i>Second Term</i>	<i>Credits</i>
BIO ENG 140	1
<b>BIOLOGY 107 [BSCI]</b>	<b>4</b>
CHEM 106 or 116	4
HISTORY 105 [ROOT] or 305 [ROOT]	3
MATH 172 or 182	4
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
BIO ENG 205	1
CHE 201	3
<b>Humanities [HUM]</b>	<b>3</b>
<b>UCORE Inquiry<sup>2</sup></b>	<b>3</b>
MATH 220 or 230	2 or 3
MATH 273 or 283	2
PHYSICS 201 and 211, or 205	4 or 5
<i>Second Term</i>	<i>Credits</i>
BIO ENG 210	2
CE 211	3
MATH 315	3
PHYSICS 202 and 212, or 206	4 or 5
STAT 370 or 423	3
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
BIO ENG 310	3
BIO ENG 321	3
BIO ENG 322 [M]	1
BIO ENG 350	3
E E 261	3
<i>Second Term</i>	<i>Credits</i>
BIO ENG 330	3
BIO ENG 340	4
Bioengineering Elective <sup>23</sup>	3
<b>Diversity [DIVR]</b>	<b>3</b>
<b>UCORE Inquiry<sup>2</sup></b>	<b>3</b>
<b>ECONS 101 [SSCI], 102 [SSCI], or 198</b>	<b>3</b>

## Fourth Year

<i>First Term</i>	<i>Credits</i>
BIO ENG 410 [M]	3
BIO ENG 440	4
Communication [COMM] or Written Communication [WRTG]	3
Technical Electives <sup>3</sup>	6
<i>Second Term</i>	<i>Credits</i>
BIO ENG 411 [CAPS]	3
Bioengineering Electives <sup>23</sup>	3
Technical Electives <sup>34</sup>	6
Elective	1
Complete BIO ENG Exit Interview	

## Footnotes

<sup>1</sup> 3 credit 300-400-level engineering course may be substituted for ENGR 120 by approval of advisor.

<sup>2</sup> Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.

<sup>23</sup> Bioengineering Electives (6 credits): Must have a BIO ENG subject, selected from the following: BIO ENG 425, 435, 455, 476, or 481.

<sup>34</sup> Technical Electives (12 credits): Approved courses include BIOLOGY 106, 251, CPT S 121, E E 214, 262, ME 116, 212, 216, MSE 201, PHIL 365, any 300-400 level BIO ENG, BIOLOGY, CE, CHE, CHEM, CPT S, E E, MATH, MBIOS, ME, MSE, NEUROSCI, PHYSICS, or STAT course as approved, or other courses as approved by advisor. Must include sufficient 300-400-level courses to meet University requirement of 40 credits upper-division coursework.

## Bioengineering – Pre-Med Option (127 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

## First Year

<i>First Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>2</sup>	3
CHEM 105 [PSCI]	4
ENGLISH 101 [WRTG]	3
ENGR 120 <sup>1</sup>	2

MATH 171 [QUAN]	4
<i>Second Term</i>	<i>Credits</i>
BIO ENG 140	1
<b>BIOLOGY 107 [BSCI]</b>	<b>4</b>
CHEM 106 or 116	4
HISTORY 105 [ROOT] or 305 [ROOT]	3
MATH 172 or 182	4
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
BIO ENG 205	1
BIOLOGY 106	4
CHE 201	3
MATH 220 or 230	2 or 3
MATH 273 or 283	2
PHYSICS 201 and 211, or 205	4 or 5
<i>Second Term</i>	<i>Credits</i>
BIO ENG 210	2
CE 211	3
MATH 315	3
PHYSICS 202 and 212, or 206	4 or 5
STAT 370 or 423	3
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
BIO ENG 310	3
BIO ENG 321	3
BIO ENG 322 [M]	1
CHEM 345	4
E E 261	3
MBIOS 301	4
<i>Second Term</i>	<i>Credits</i>
BIO ENG 330	3
BIO ENG 340	4
CHEM 348	4
MBIOS 303 or CHEM 370	4
<b>Fourth Year</b>	

<i>First Term</i>	<i>Credits</i>
BIO ENG 350	3
BIO ENG 410 [M]	3
BIO ENG 440	4
Communication [COMM] or Written Communication [WRTG]	3
Diversity [DIVR]	3
UCORE Inquiry <sup>2</sup>	3
<i>Second Term</i>	<i>Credits</i>
BIO ENG 411 [CAPS]	3
Bioengineering Electives <sup>23</sup>	6
ECONS 101 [SSCI] or 102 [SSCI] or 198	3
Humanities [HUM]	3
UCORE Inquiry <sup>2</sup>	3
Complete BIO ENG Exit Interview	

#### Footnotes

<sup>1</sup> 3 credit 300-400 level engineering course may be substituted for ENGR 120 by approval of advisor.

<sup>2</sup> Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.

<sup>23</sup> Bioengineering Electives (6 credits): Must have a BIO ENG subject, selected from the following: BIO ENG 425, 435, 455, 476, or 481.

## Chemical Engineering – General (121 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

<i>First Term</i>	<i>Credits</i>
CHE 101	1
CHEM 105 [PSCI]	4
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
HISTORY 105 [ROOT] or 305 [ROOT]	3
MATH 171 [QUAN]	4
<i>Second Term</i>	<i>Credits</i>
BIOLOGY 106 [BSCI] or 107 [BSCI]	4
CHE 110 <sup>+2</sup>	2
CHEM 106 or 116	4

ENGLISH 101 [WRTG]	3
MATH 172 or 182	4
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
CHE 201	3
CHEM 345	4
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3
MATH 273 or 283	2
PHYSICS 201 and 211, or 205	4 or 5
<i>Second Term</i>	<i>Credits</i>
CHE 211	3
CHEM 348 or MBIOS 303	4
MATH 220 or 230	2 or 3
MATH 315	3
PHYSICS 202 and 212, or 206	4 or 5
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>1</sup>	3
CHE 301	3
CHE 310	3
CHE 498	1
ENGLISH 402 [WRTG] [M] or 403 [WRTG] [M]	3
Technical Elective <sup>1,2,3</sup>	3
<i>Second Term</i>	<i>Credits</i>
CHE 302	3
CHE 321	3
CHE 332	3
CHE 334	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
CHE 352	3
CHE 432 [M]	3
CHE 441	3

CHE 450	3
<b>ECONS 101 [SSCI] or 102 [SSCI] or 198</b>	<b>3</b>
<i>Second Term</i>	<i>Credits</i>
CHE 433 [M]	2
CHE 451 [M] [CAPS]	3
CHE Elective <sup>1,3,2,4</sup>	6
Technical Elective <sup>1,2,3</sup>	3
Exit Interview	

**Footnotes**

**† Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.**

<sup>1,2</sup> Three credit 300-400-level CHE course may be substituted for CHE 110 by approval of advisor. The CHE course can be included as three credits of the CHE or Technical Electives.

<sup>2,3</sup> Technical Electives (6 credits): MSE 201 or any 300-400-level BIO ENG, CHEM, CHE, CE, E E, ENGR, MATH, ME, MSE, PHYSICS, or STAT course as approved by advisor.

<sup>3,4</sup> CHE Electives (6 credits): Any 400-level CHE course not used to fulfill major requirements. A maximum of 3 credits is allowed in CHE 488, 495, and 499 combined.

**Design and Construction**

**Bachelor of Science in Architectural Studies (120 Credits)**

**ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI**

Teal highlight represents a specified UCORE course from the set.  
Yellow highlight represents an open/elective UCORE course.

**First Year**

<i>First Term</i>	<i>Credits</i>
COM 102 [COMM]	3
ENGLISH 101 [WRTG]	3
Quantitative Reasoning [QUAN] <sup>1,2</sup>	3
<b>SDC 100 [ARTS]</b>	<b>3</b>
SDC 120	3

<i>Second Term</i>	<i>Credits</i>
FINE ART 101, 201, or 202	3
HISTORY 105 [ROOT]	3
<b>PHYSICS 101 [PSCI]<sup>2</sup></b>	<b>3</b>
<b>PHYSICS 111 [PSCI]</b>	<b>1</b>

<b>PSYCH 105 [SSCI] or SOC 101[SSCI]</b>	<b>3</b>
SDC 140	3
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
ARCH 201	5
ARCH 210	3
CST M 201	3
SDC 250	3
SDC 300	1
<i>Second Term</i>	<i>Credits</i>
ARCH 203	5
ARCH 209	3
ARCH 215	3
CST M 202	3
SDC 350 [M]	3
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
ARCH 301	5
ARCH 309 [M]	3
ARCH 351	3
ARCH 451	3
CST M 332	3
<i>Second Term</i>	<i>Credits</i>
ARCH 303	5
ARCH 352	3
<b>Biological Sciences [BSCI]</b>	<b>4</b>
CST M 333	3
<b>UCORE Inquiry<sup>3</sup></b>	<b>4</b>
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
ARCH 401	6
<b>Diversity [DIVR]</b>	<b>3</b>
<b>UCORE Inquiry<sup>3</sup></b>	<b>3</b>
Supportive Electives <sup>34</sup>	4
<i>Second Term</i>	<i>Credits</i>



ARCH 403 [CAPS]	6
Humanities [HUM]	3
UCORE Inquiry <sup>3</sup>	3
Supportive Electives <sup>34</sup>	3

### Footnotes

<sup>1</sup> All first-year students must take the math placement exam. Completion of MATH 108 with a grade of C or better, a minimum ALEKS math placement score of 75%, or passing MATH 140, 171, or 202 is required for PHYSICS 101 [PSCI]. MATH 108 does not fulfill the University [QUAN] requirement for graduation.

<sup>2</sup> Math and Physics are not required for admission to the major (professional program, beginning in second year); however, Math and Physics are course prerequisites for ARCH 351/352 and CST M 332/333 in the third year.

<sup>3</sup> Must complete 3 of these 4 UCORE categories: BSCI, DIVR, EQJS, HUM.

<sup>34</sup> Supportive Electives: At least 7 credits of any 300-400-level courses from ARCH, CST M, DESIGN, I D, LND ARCH, SDC, or other courses approved in consultation with ARCH Program Head not used to fulfill major requirements.

## Construction Management Program (120 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

<i>First Term</i>	<i>Credits</i>
Pre-Professional Program (1st Year)	
Communication [COMM]	3
ECONS 101 [SSCI]	3
HISTORY 105 [ROOT]	3
SDC 100 [ARTS]	3
SOE 101 [PSCI]	4
<i>Second Term</i>	<i>Credits</i>
CST M 102 <sup>1</sup>	2
Diversity [DIVR] or Humanities [HUM] <sup>2</sup>	3
UCORE Inquiry <sup>2</sup>	3
ECONS 102	3
ENGLISH 101 [WRTG]	3
MATH 171 [QUAN]	4

<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
Professional Program (2nd - 4th Years)	
ARCH 351	3
CST M 222	2
CST M 201	3
CST M 254	2
PHYSICS 101 OR 201	3
PHYSICS 111 OR 211	1
<i>Second Term</i>	<i>Credits</i>
ACCTG 230	3
ARCH 352	3
B LAW 210	3
CST M 202	3
CST M 252	4
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
C E 302	2
CST M 332	3
CST M 362 [M]	3
CST M 370	3
CST M 451	3
<i>Second Term</i>	<i>Credits</i>
CST M 333	3
CST M 356	3
CST M 368	3
CST M 371	3
CST M 483	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
ARCH 463	3
CST M 460	3
CST M 462	3
MGMT 301	3
300-400-level CST M Elective	3

<i>Second Term</i>	<i>Credits</i>
Biological Sciences [BSCI]	3
CST M 473	3
CST M 475 [CAPS] [M]	3
Diversity [DIVR] or Humanities [HUM] <sup>2</sup>	3
UCORE Inquiry <sup>2</sup>	6
300-400-level Business Elective <sup>3</sup>	3
Complete Senior Exit Survey	

### Footnotes

<sup>1</sup> Transfer students from community colleges or institutions outside WSU may test out of CST M 102 via an application from the School of Design and Construction.

<sup>2</sup> University Requirements include 3 credits of [HUM] and 3 credits of [DIVR].

<sup>2</sup> Must complete 3 of these 4 UCORE categories: BSCI, DIVR, EQJS, HUM. A [HUM] or [DIVR] course is required for admission to the major.

<sup>3</sup> Business Elective: Any 300-400-level ACCTG, B LAW, ECONS, ENTRP, FIN, HBM, I BUS, MGMT, MGTOP, MIS, or MKTG course. Another course may be approved in consultation with Construction Management Program Head.

## Interior Design (120 Credits)

**ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI**

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

<i>First Term</i>	<i>Credits</i>
COM 102 [COMM]	3
HISTORY 105 [ROOT]	3
SDC 100 [ARTS]	3
SDC 120	3
SOC 101 [SSCI] or PSYCH 105 [SSCI]	3

<i>Second Term</i>	<i>Credits</i>
Biological [BSCI] <sup>4</sup>	3 or 4
ENGLISH 101 [WRTG]	3
FINE ART 101, 201, or 202	3
Quantitative Reasoning [QUAN] <sup>2</sup>	3
SDC 140	3
UCORE Inquiry <sup>1</sup>	3

**Second Year**

<i>First Term</i>	<i>Credits</i>
I D 197	3
I D 201	4
I D 205	3
I D 277	1
SDC 250	3
SDC 300 <sup>3</sup>	1

<i>Second Term</i>	<i>Credits</i>
<b>Diversity [DIVR]</b>	<b>3</b>
I D 203	4
I D 215	3
I D 297	3
SDC 350 [M]	3
<b>UCORE Inquiry<sup>1</sup></b>	<b>3</b>
Complete Writing Portfolio	

**Third Year**

<i>First Term</i>	<i>Credits</i>
I D 312	2
I D 321	4
I D 325	3
I D 326	3
I D 397	3

  

<i>Second Term</i>	<i>Credits</i>
I D 333	4
I D 350	3
I D 415	3
I D 460	3
Supportive Electives <sup>4</sup>	4 or 3

**Fourth Year**

<i>First Term</i>	<i>Credits</i>
<b>Humanities [HUM]</b>	<b>3</b>
I D 425 or 490	5
<b>UCORE Inquiry<sup>1</sup></b>	<b>3</b>
Supportive Electives <sup>4</sup>	7

<i>Second Term</i>	<i>Credits</i>
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I D 426 [CAPS]	5
Physical Science [PSCI] <sup>1</sup>	4 or 3
SDC 473 [M]	3
UCORE Inquiry <sup>1</sup>	3
Portfolio Review <sup>5</sup>	
Complete Senior Exit Survey	

### Footnotes

<sup>1</sup> For a total of 7 credits—one Biological Sciences [BSCI] and one Physical Sciences [PSCI] course, including one lab course.

<sup>1</sup> Must complete 4 of these 5 UCORE categories: BSCI, DIVR, EQJS, HUM, PSCI. One lab science (BSCI or PSCI) must be completed.

<sup>2</sup> All first-year students must take the ALEKS math placement exam. Prerequisites may be required depending on the score.

<sup>3</sup> Students must complete SDC 300 by the end of the second year.

<sup>4</sup> Supportive Electives: At least 10 credits of any 300-400-level courses from ARCH, CST M, I D, DESIGN, LND ARCH, SDC, or other courses approved in consultation with I D Program Head not used to fulfill major requirements. Italian Language course is considered a supportive elective for students who study abroad. Total credits must meet the University requirement of 120 credits of coursework.

<sup>5</sup> Portfolio Review required in the final semester of program.

## Landscape Architecture (120 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

<i>First Term</i>	<i>Credits</i>
BIOLOGY 120 [BSCI] <sup>1</sup>	4
HISTORY 105 [ROOT]	3
PSYCH 105 [SSCI] or SOC 101 [SSCI]	3
SDC 100 [ARTS]	3
SDC 120	3
<i>Second Term</i>	<i>Credits</i>
COM 102 [COMM]	3
ENGLISH 101 [WRTG]	3
FINE ART 101, 201, or 202	3
SDC 140	3

**SOE 101 [PSCI] 4**

**Second Year**

*First Term Credits*

Digital Tools Requirement I <sup>2</sup>	3
LND ARCH 222	1
LND ARCH 262	4
Quantitative Reasoning [QUAN] <sup>3</sup>	3
SDC 250	3
SDC 300 <sup>4</sup>	1

*Second Term Credits*

LND ARCH 263	4
LND ARCH 297	3
LND ARCH 365	4
SDC 350 [M]	3
SOIL SCI 201	3
Complete Writing Portfolio	

**Third Year**

*First Term Credits*

Digital Tools Requirement II <sup>5</sup>	3
HORT 330	3
LND ARCH 327	3
LND ARCH 362	4
LND ARCH 366	4

*Second Term Credits*

HORT 331	3
LND ARCH 363	4
LND ARCH 367	3
LND ARCH 380 <sup>6</sup>	3

**Fourth Year**

*First Term Credits*

Diversity [DIVR]	3
Humanities [HUM]	3
LND ARCH 470	4
UCORE Inquiry <sup>7</sup>	6
Supportive Electives <sup>7</sup>	3

*Second Term Credits*

	<p>LND ARCH 450 [M] 3</p> <p>LND ARCH 485 [CAPS] [M] 4</p> <p>SDC 473 [M] 3</p> <p>Supportive Electives<sup>78</sup> 3</p> <p>Complete Digital Portfolio</p> <hr/> <p><b>Footnotes</b></p> <p><sup>1</sup> Students are encouraged to complete BIOLOGY 120 [BSCI] and SOE 101 [PSCI] during the first year; however, these are not a requirement for admission to the professional program. If BIOLOGY 120 is not taken in Fall, BIOLOGY 106 can be substituted in the Spring.</p> <p><sup>2</sup> Digital Tools Requirement I (3 credits): Select from I D 197, LND ARCH 210, or approved alternative.</p> <p><sup>3</sup> All first-year students must take the ALEKS math placement exam. Prerequisites may be required depending on the score.</p> <p><sup>4</sup> Students must complete SDC 300 by the end of the second year.</p> <p><sup>5</sup> Digital Tools Requirement II (3 credits): Select from I D 397, LND ARCH 467, SOIL SCI 368, or approved alternative.</p> <p><sup>6</sup> If LND ARCH 380 is not available, may use BIOLOGY 372, 462, SOE 300, 454, or 464.</p> <p><sup>7</sup> <b>Must complete 2 of these 3 UCORE categories: DIVR, EQJS, HUM.</b></p> <p><sup>78</sup> Supportive electives: At least 6 credits of 300-400-level courses from ARCH, CST M, DESIGN, I D, LND ARCH, SDC, or other courses approved in consultation with LA Program Head not used to fulfill major requirements.</p>												
<p><b>Electrical Engineering and Computer Science</b></p>	<p><b>Bachelor of Arts, Computer Science (120 Credits)</b></p> <p><b>ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.</b></p> <p>Teal highlight represents a specified UCORE course from the set.</p> <ul style="list-style-type: none"> <li>The BSCI and PSCI are specified in the context of the required 15 credits of science.</li> </ul> <p>Yellow highlight represents an open/elective UCORE course.</p> <p><b>First Year</b></p> <table border="0"> <thead> <tr> <th><i>First Term</i></th> <th><i>Credits</i></th> </tr> </thead> <tbody> <tr> <td>Arts [ARTS]</td> <td>3</td> </tr> <tr> <td>UCORE Inquiry <sup>1</sup></td> <td>3</td> </tr> <tr> <td>CPT S 121 or 131<sup>2</sup></td> <td>4</td> </tr> <tr> <td>HISTORY 105 [ROOT]</td> <td>3</td> </tr> <tr> <td>MATH 171</td> <td>4</td> </tr> </tbody> </table>	<i>First Term</i>	<i>Credits</i>	Arts [ARTS]	3	UCORE Inquiry <sup>1</sup>	3	CPT S 121 or 131 <sup>2</sup>	4	HISTORY 105 [ROOT]	3	MATH 171	4
<i>First Term</i>	<i>Credits</i>												
Arts [ARTS]	3												
UCORE Inquiry <sup>1</sup>	3												
CPT S 121 or 131 <sup>2</sup>	4												
HISTORY 105 [ROOT]	3												
MATH 171	4												

PHIL 201 [QUAN]	3
<i>Second Term</i>	<i>Credits</i>
CPT S 122 or 132 <sup>2</sup>	4
ENGLISH 101 [WRTG]	3
MATH 172	4
MATH 216	3
Social Sciences [SSCI]	3
UCORE Inquiry <sup>1</sup>	3
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
CPT S 223 or 233 <sup>2</sup>	3
CPT S 260	3
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
Minor Elective <sup>3</sup>	3
STAT 212 or 360	3 or 4
<i>Second Term</i>	<i>Credits</i>
Biological Sciences [BSCI] with lab <sup>4</sup>	4
CPT S 355	3
MATH 220	2
Physical Sciences [PSCI] with lab <sup>4</sup>	4
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
CPT S 322 [M]	3
ENGLISH 402 [WRTG] [M]	3
Minor Electives (choose two) <sup>3</sup>	5 or 6
Science Elective (with lab) <sup>4</sup>	4
<i>Second Term</i>	<i>Credits</i>
300-400-level Minor Elective <sup>3</sup>	3
CPT S 302	3
CPT S 317	3
CPT S 360 or 370 <sup>1</sup>	4
Science Elective <sup>4</sup>	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>



300-400-level Minor Elective <sup>2</sup>	3
CPT S 327	3
CPT S 350	3
CPT S 421 <sup>5</sup>	3
<b>Humanities [HUM]</b>	<b>3</b>
<b>UCORE Inquiry <sup>1</sup></b>	<b>3</b>
<i>Second Term</i>	
	<i>Credits</i>
300-400-level Minor Elective <sup>3</sup>	3
Advanced CPT S Electives (choose two) <sup>6</sup>	6
CPT S 423 [CAPS] <sup>5</sup>	3
Complete CPT S Exit Interview and Survey	

### Footnotes

- <sup>1</sup> Must complete 4 of these 5 UCORE categories: ARTS, DIVR, EQJS, HUM, SSCI.
- <sup>2</sup> Students may choose between a C/C++ (CPTS 121, 122, 223, 360) path or a Java programming (CPTS 131, 132, 233, 370) path. Students should stick to one path option. The Java track is not available in Tri Cities.
- <sup>3</sup> Elective credits may include a minor program. Completion of a minor is strongly encouraged.
- <sup>4</sup> Science electives: A minimum of 15 credits required. Must include a year-long sequence (two semesters including a laboratory in each semester) of [BSCI] or [PSCI], and two additional science courses, one of which must have a laboratory component. Electives include BIOLOGY 106, 107; CHEM 101, 102 or 105, 106; PHYSICS 101/111, 102/112 or 201/211, 202/212.
- <sup>5</sup> Consult with an advisor at campus of residence for allowed substitutions.
- <sup>6</sup> Advanced CPT S Electives: 6 credits required. These credits must be in 300- or 400- or 500-level CPT S courses and they must include at least one of the following courses: CPT S 315, 415, 451, 471, or 475. A maximum of 3 credits from CPT S 490 and 499, or 3 credits from CPT S 488 or 499 may be selected as CPT S electives. Consult with advisor at campus of residence for course choices.

## Bachelor of Science, Computer Science (120 Credits)

**ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.**

Teal highlight represents a specified UCORE course from the set.

- The BSCI and PSCI are specified in the context of the required 15 credits of science.

Yellow highlight represents an open/elective UCORE course.

**First Year**

<i>First Term</i>	<i>Credits</i>
<u>CPT S 101</u>	<u>1</u>
CPT S 121 or 131 <sup>1</sup>	4
ENGLISH 101 [WRTG]	3
MATH 171 [QUAN]	4
PHIL 201	3

<i>Second Term</i>	<i>Credits</i>
CPT S 122 or 132 <sup>1</sup>	4
HISTORY 105 [ROOT]	3
MATH 172	4
MATH 216	3

**Second Year**

<i>First Term</i>	<i>Credits</i>
CPT S 223 or 233 <sup>1</sup>	3
CPT S 260	3
MATH 220_or 225	2 or 3
MATH 273 or 301	2 or 3
Lab Science Requirement [BSCI] or [PSCI] <sup>2</sup>	4

<i>Second Term</i>	<i>Credits</i>
CPT S 317	3
CPT S 322 [M]	3
CPT S 355	3
CPT S Technical Elective <sup>2</sup>	3
Lab Science Requirement [BSCI] or [PSCI] <sup>2</sup>	4
Complete Writing Portfolio	

**Third Year**

<i>First Term</i>	<i>Credits</i>
CPT S 302	3
CPT S 327	3
CPT S 350	3
CPT S 360 or 370 <sup>1</sup>	4
ENGLISH 402 [WRTG] [M]	3

<i>Second Term</i>	<i>Credits</i>
<u>Diversity [DIVR]</u>	<u>3</u>
<u>UCORE Inquiry<sup>3</sup></u>	<u>3</u>

STAT 360	3
Computer Science Electives <sup>4</sup>	6
CPT S Technical Elective <sup>2</sup>	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>3</sup>	6
CPT S 421	3
Social Sciences [SSCI]	3
CPT S Technical Electives <sup>2</sup>	6
<i>Second Term</i>	<i>Credits</i>
CPT S 423 [CAPS]	3
Humanities [HUM]	3
UCORE Inquiry <sup>3</sup>	3
Computer Science Electives <sup>4</sup>	6
Complete CPT S Exit Interview and Survey	

**Footnotes**

- <sup>1</sup> Students may choose between a C/C++ (CPT S 121, 122, 223, 360) path or a Java programming (CPT S 131, 132, 233, 370) path. Students should stick to one path option. The Java track is not available in Tri-Cities.
- <sup>2</sup> Lab Science Requirement: Choose from CHEM 105 [PSCI], 106, PHYSICS 201 [PSCI] and 211, 202 [PSCI] and 212, BIOLOGY 106 [BSCI], 107 [BSCI]. Graduation requirements stipulate one each of [BSCI], and [PSCI].
- <sup>3</sup> CPT S Technical Electives consist of 4 courses (12 credits) taken from the courses listed below, with at least one course from the Software area and one course from the Data and Information Management area. CPT S 483 special topics course may also be considered as a CPT S Technical Elective with departmental approval. Consult your academic advisor. Systems: CPT S 411, 427, 428, 442, 455, 460, 464, 466; Data and Information Management: CPT S 315, 415, 451, 471, 475; Software: CPT S 321, 323, 422, 443, 479, 481, 484, 487, 489; Artificial Intelligence and Machine Learning: CPT S 434, 437, 440; Scientific and Visual Computing: CPT S 430, 442, 453.
- <sup>4</sup> Must complete 4 of these 5 UCORE categories: ARTS, DIVR, EQJS, HUM, SSCI.
- <sup>5</sup> Computer Science Electives: Four additional courses (12 credits) at the 300-400-level that are not used as Technical Electives. At least 6 credits must be CPT S courses. Approved non-CPT S courses are: 300-400-level E E courses, CE 463, DTC 335, E M 464, MATH 315, 401, 420, 421, MBIOS 478, MSE 302, PHYSICS 303, 443, and STAT 436. Additional Free Electives may include a maximum of 3 credits each of CPT S 490 and 499, or 3 credits each of CPT S 488, 499, and ENGR 489.

<sup>5</sup> ECONS 101 or 102 recommended.

## Computer Engineering (123 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

*First Term* *Credits*

CHEM 105 [PSCI] 4

CPT S 121 4

ENGLISH 101 [WRTG] 3

MATH 171 [QUAN] 4

*Second Term* *Credits*

CPT S 122 4

MATH 172 4

MATH 216 3

PHYSICS 201 3

PHYSICS 211 1

### Second Year

*First Term* *Credits*

CPT S 223 3

E E 214 4

MATH 220 2

MATH 273 2

PHYSICS 202 3

PHYSICS 212 1

*Second Term* *Credits*

Arts [ARTS] 3

UCORE Inquiry <sup>1</sup> 3

E E 234 4

E E 261 3

E E 262 1

HISTORY 105 [ROOT] 3

MATH 315 3

Complete Writing Portfolio

**Third Year**

<i>First Term</i>	<i>Credits</i>
E E 311	3
E E 321	3
E E 324 [M]	4
E E 352 [M]	3
ENGLISH 402 [WRTG]	3

<i>Second Term</i>	<i>Credits</i>
Biological Sciences [BSCI]	3 or 4
UCORE Inquiry <sup>1</sup>	3 or 4
CPT S 360	4
E E 334	3
Engineering Science Elective <sup>2</sup>	3
STAT 360	3

**Fourth Year**

<i>First Term</i>	<i>Credits</i>
CPT E Technical Electives <sup>3</sup>	3
E E 415	2
ECONS 101 [SSCI] or 102 [SSCI]	3
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3
Senior Design Elective I <sup>5 4</sup>	3

<i>Second Term</i>	<i>Credits</i>
CPT E Technical Electives <sup>4 3</sup>	6
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
E E 302	3
E E 416 [CAPS] [M]	3
Complete CPT E Exit Interview and Survey	

**Footnotes**

<sup>1</sup> ~~Students may choose between a C/C++ (CPT S 121, 122, 223, 360) path or a Java programming (CPT S 131, 132, 233, 370) path. Students should stick to one path option. The Java track is not available in Tri-Cities.~~

<sup>1</sup> Must complete 4 of these 5 UCORE categories: ARTS, BSCI, DIVR, EQJS, HUM.

- <sup>2</sup> Engineering Science Elective: Choose from E E 331, 341, ME 301, or MSE 302. (Note: If either E E 331 or E E 341 is taken as an engineering science elective, it cannot also count as a technical elective.)
- <sup>3</sup> Technical electives (9 credits) must be 300-400-level courses and must be chosen with an advisor's approval. Any of the following courses may be chosen to fulfill technical elective requirements: CPT S 317, 322, 327, 350, 355, 411, 422, 430, 437, 440, 442, 443, 451, 452, 455, 460, 466; E E 331, 341, 351, 431, 432, 434, 439, 451, 464, 466, 476, 489, 496; One only of MATH 325, 340, 364, 415, 421, 440, 441, 448, 453, 464, 466.
- <sup>4</sup> Senior Design Electives adhere to one of the following sequences: (1) ASIC & Digital Systems: E E 416 and 434; (2) VLSI Design: E E 466 and 416. Students are strongly recommended to complete both senior design elective sequences.

## Electrical Engineering (124 Credits)

**ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.**

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

<i>First Term</i>	<i>Credits</i>
CHEM 105 [PSCI]	4
ENGLISH 101 [WRTG]	3
ENGR 120	2
HISTORY 105 [ROOT]	3
MATH 171 [QUAN]	4
<i>Second Term</i>	<i>Credits</i>
CPT S 121 or 131	4
MATH 172	4
MATH 220	2
PHYSICS 201	3
PHYSICS 211	1

### Second Year

<i>First Term</i>	<i>Credits</i>
CPT S 122 or 132	4
E E 214	4
MATH 273	2
PHYSICS 202	3
PHYSICS 212	1

<i>Second Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>1</sup>	3
E E 234	4
E E 261	3
E E 262	1
ECONS 101 [SSCI] or 102 [SSCI]	3
MATH 315	3
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
E E 311	3
E E 321	3
E E 331	3
E E 352 [M]	3
Engineering Science Elective <sup>2</sup>	3
<i>Second Term</i>	<i>Credits</i>
E E 302	3
E E 341	3
E E 361	3
STAT 360	3
Track Elective <sup>3,4</sup>	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
E E 415	3
Engineering Science Elective <sup>2</sup>	3
ENGLISH 402 [WRTG]	3
Track Electives <sup>3,4</sup>	6
<i>Second Term</i>	<i>Credits</i>
300-400-level Track Electives <sup>3,4</sup>	6
Biological Sciences [BSCI]	3 or 4
UCORE Inquiry <sup>1</sup>	3 or 4
E E 416 [CAPS] [M]	3
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3

## Complete E E Exit Interview and Survey

### Footnotes

- <sup>1</sup> Must complete 4 of these 5 UCORE categories: ARTS, BSCI, DIVR, EQJS, HUM.
- <sup>2</sup> Engineering Science Electives (6 credits): Choose from CE 211, ME 212, 301, MSE 302.
- <sup>3</sup> Track Electives: Students follow one of five tracks for an emphasis in their degree program. A total of 15 credits are required for each track. Any electives within a track must be chosen from the list of approved technical electives in footnote 3. Power Track: required: E E 362 [M], 491, at least 6 credits from E E 486, 489, 492, 493, 494, and remaining credits from list of approved technical electives; Microelectronics Track: required: E E 351, 476, at least two from E E 431, 434, 496, and one from E E 431, 434, 466, 488, 496, 499, ENGR 489 with a combined maximum of 3 credits total from E E 488 and ENGR 489 or E E 499; Systems Track: required: E E 464, 489, at least one from E E 432, 451, and one from E E 351, 431, 432, 451, 470, and remaining credits from list of approved technical electives; General Track: at least one from E E 324 [M], 351, 362 [M], 489; at least three 400-level E E letter graded course not used to meet other program requirements, and one course from the list of approved technical electives; or Computer Engineering Track: required: E E 434, 466, at least one from E E 324 [M], 334, 431, 476, CPT S 360, and remaining credits from list of approved technical electives and at least one 400-level E E letter graded course not used to meet other program requirements.
- <sup>4</sup> Technical Electives approved for Power Track, Systems Track, General Track (minimum 9 credits 400-level E E courses), and Computer Engineering Track (minimum 3 credits 400-level E E courses) include: ASTRONOM 435, CE 463, CHEM 331, 333, 345, MATH 320 [M], 325, 340, 364, 401 [M], 402 [M], 415, 420, 421 [M], 440, 441, 448, 453, 464, 466, ME 304, 401, MSE 402, 403, PHYSICS 303, 304, 320, 443, 450, and 463, or any 300-400-level CPT S or E E course not used to fulfill other requirements.

## Software Engineering (122 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

### First Year

<i>First Term</i>	<i>Credits</i>
CPT S 101	1
CPT S 121 or CPT S 131 <sup>1</sup>	4
ENGLISH 101 [WRTG] or ENGLISH 105 [WRTG]	3



MATH 171 [QUAN]	4
Math Requirement <sup>2</sup>	3
<i>Second Term</i>	<i>Credits</i>
CPT S 122 or CPT S 132 <sup>1</sup>	4
HISTORY 105 [ROOT]	3
MATH 172	4
MATH 216	3
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
CPT S 223 or CPT S 233 <sup>1</sup>	3
CPT S 260	3
MATH 220 <u>or 225</u>	<u>2 or 3</u>
Math Requirement <sup>2</sup>	2 or 3
<b>PHYSICS 201/211 [PSCI] or CHEM 105 [PSCI]</b>	4
<i>Second Term</i>	<i>Credits</i>
<b>Arts [ARTS]</b>	<b>3</b>
CPT S 321	3
CPT S 355	3
<b>ECONS 101 [SSCI] or ECONS 102 [SSCI]</b>	3
<b>Humanities [HUM]</b>	<b>3</b>
<b>UCORE Inquiry</b> <sup>3</sup>	<b>6</b>
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
CPT S 302	3
CPT S 317	3
CPT S 322 [M]	3
CPT S 360 or CPT S 370 <sup>1</sup>	4
ENGLISH 402 [WRTG] or ENGLISH 403 [WRTG]	3
<i>Second Term</i>	<i>Credits</i>
<b>Biological Science [BSCI]</b>	<b>3</b>
<b>UCORE Inquiry</b> <sup>3</sup>	<b>3</b>
CPT S 350	3
CPT S 487	3
<b>Diversity [DIVR]</b>	<b>3</b>
<b>UCORE Inquiry</b> <sup>3</sup>	<b>3</b>
MATH/CPT S 453 or STAT 419	3

	<p>STAT 360 3</p> <p><b>Fourth Year</b></p> <p><i>First Term</i> <span style="float: right;"><i>Credits</i></span></p> <p>CPT S 327 3</p> <p>CPT S 421 3</p> <p>CPT S 422 [M] 3</p> <p>CPT S 484 3</p> <p>Software Engineering Option Course<sup>4</sup> 3</p> <p><i>Second Term</i> <span style="float: right;"><i>Credits</i></span></p> <p>CPT S 423 [CAPS] 3</p> <p>CPT S 476 3</p> <p>Data and Information Management Elective<sup>5</sup> 3</p> <p>Software Engineering Option Courses<sup>4</sup> 6</p> <p>Complete CPT E Exit Interview and Survey</p> <hr/> <p><b>Footnotes</b></p> <p><sup>1</sup> Students may choose between a C/C++ (CPT S 121, 122, 223, 360) path or a Java programming (CPT S 131, 132, 233, 370) path. Students should stick to one path option. <del>The Java track is not available in Tri-Cities.</del></p> <p><sup>1</sup> Math Requirement: minimum 5 credits from the following: MATH 273, MATH 301, PHIL 201, STAT 212.</p> <p><sup>3</sup> Must complete 4 of these 5 UCORE categories: ARTS, BSCI, DIVR, EQJS, HUM.</p> <p><sup>4</sup> Software Engineering Option Courses (9 credits required): Any 400-level course in CPT S, E E, or MATH not used to fulfill major requirements. Upper-division courses in other disciplines may be used with prior approval by advisor.</p> <p><sup>5</sup> Data and Information Management Elective (3 credits required): Choose at least one from CPT S 315, 415, 451, 471, 475.</p>
<p><b>Engineering and Computer Science (Vancouver)</b></p>	<p><b>Bachelor of Science, Computer Science (120 Credits)</b></p> <p>ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.</p> <p>Teal highlight represents a specified UCORE course from the set.</p> <ul style="list-style-type: none"> <li>The BSCI and PSCI are specified in the context of the required 15 credits of science.</li> </ul> <p>Yellow highlight represents an open/elective UCORE course.</p>

**First Year**

<i>First Term</i>	<i>Credits</i>
CS 121	4
HISTORY 105 [ROOT]	3
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3
MATH 171 [QUAN]	4

<i>Second Term</i>	<i>Credits</i>
CS 122	4
CS 166	3
ENGLISH 101 [WRTG]	3
MATH 172	4

**Second Year**

<i>First Term</i>	<i>Credits</i>
CS 223	3
CS 260	3
ECONS 101 [SSCI] or 102 [SSCI]	3
MATH 220	2
PHYSICS 201 [PSCI]	3
PHYSICS 211 [PSCI]	1

<i>Second Term</i>	<i>Credits</i>
Biological Sciences [BSCI] with lab	4
CS 224	3
CS 261	3
MATH 273 or 301	2-3
PHYSICS 202	3
PHYSICS 212	1
Complete Writing Portfolio	

**Third Year**

<i>First Term</i>	<i>Credits</i>
CS 317	3
CS 360	4
CS Option Course <sup>2</sup>	3
ENGLISH 402 [WRTG]	3
STAT 360	3

<i>Second Term</i>	<i>Credits</i>
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CS 320 [M]	3
CS 351	3
CS 355	3
CS Option Course <sup>2</sup>	3
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>1</sup>	3
CS 420 [CAPS] [M]	3
CS 450	3
CS Option Courses <sup>1</sup>	6
<i>Second Term</i>	<i>Credits</i>
CS 402 [M]	3
CS 421	3
CS 460	3
CS Option Course <sup>2</sup>	3
CS Security Option Course <sup>3</sup>	3

**Footnotes**

<sup>1</sup> Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.

<sup>2</sup> CS Option Courses: 15 credits of option area courses are required for completion of the degree program. The option courses must be chosen from 300-400-level CS courses and may also include up to 6 hours from the following list: MATH 315, 320, 325, 364, 420, 448, 453, 466, ECE 324, 366, and 424. Other computer science-related courses may be substituted, as approved by the department.

<sup>3</sup> CS Security Option Courses: 3 credits of security option area courses are required for completion of the degree program. These credits are in addition to the 15 credits of CS Option Courses required above. CS Security Option Courses must be chosen from the following courses: CS 425, 426, and 427.

**Bachelor of Science, Electrical Engineering (121 Credits)**

**ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.**

Teal highlight represents a specified UCORE course from the set.

- The BSCI and PSCI are specified in the context of the required 15 credits of science.

Yellow highlight represents an open/elective UCORE course.

**First Year**

<i>First Term</i>	<i>Credits</i>
CHEM 105 [PSCI]	4
ECE 101	2
HISTORY 105 [ROOT]	3
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3
MATH 171 [QUAN]	4
<i>Second Term</i>	<i>Credits</i>
CS 251	4
ENGLISH 101 [WRTG]	3
MATH 172	4
PHYSICS 201 [PSCI]	3
PHYSICS 211 [PSCI]	1

**Second Year**

<i>First Term</i>	<i>Credits</i>
Biological Sciences [BSCI]	3 or 4
ECE 214	3
MATH 220	2
MATH 273	2
PHYSICS 202	3
PHYSICS 212	1
<i>Second Term</i>	<i>Credits</i>
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
ECE 234	3
ECE 260	4
ECONS 101 [SSCI] or 102 [SSCI]	3
MATH 315	3
Complete Writing Portfolio	

**Third Year**

<i>First Term</i>	<i>Credits</i>
ECE 321	3
ECE 325	4
ECE Elective <sup>2</sup>	3

ENGLISH 402 [WRTG]	3
STAT 360	3
<i>Second Term</i> <span style="float: right;"><i>Credits</i></span>	
ECE 311	3
ECE 341	3
ECE 370	3
ECE Electives <sup>2</sup>	6
<b>Fourth Year</b>	
<i>First Term</i> <span style="float: right;"><i>Credits</i></span>	
ECE 451	2
ECE Electives <sup>2</sup>	12
<i>Second Term</i> <span style="float: right;"><i>Credits</i></span>	
Arts [ARTS]	3
UCORE Inquiry <sup>1</sup>	3
ECE 405 [M]	3
ECE 452 [M] [CAPS]	3
ECE Electives <sup>2</sup>	6

**Footnotes**

<sup>1</sup> Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.

<sup>2</sup> ECE Electives must be chosen from CS 330, 466, ECE 302, 316, 324, 327, 345, 349, 366, 411, 414, 421, 424, 425, 461, 466, 471, 476, 483, 495, 496, MECH 441, 467, 468, or be pre-approved by a faculty advisor.

## Bachelor of Science, Mechanical Engineering (120 Credits)

**ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI.**

Teal highlight represents a specified UCORE course from the set.

- The BSCI and PSCI are specified in the context of the required 15 credits of science.

Yellow highlight represents an open/elective UCORE course.

**First Year**

<i>First Term</i> <span style="float: right;"><i>Credits</i></span>	
Arts [ARTS]	3

UCORE Inquiry <sup>1</sup>	3
CHEM 105 [PSCI]	4
HISTORY 105 [ROOT]	3
MATH 171 [QUAN]	4
MECH 103	2
<i>Second Term</i>	<i>Credits</i>
ENGLISH 101 [WRTG]	3
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3
MATH 172	4
MATH 220	2
MECH 101	2
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
ECONS 101 [SSCI] or 102 [SSCI]	3
MATH 273	2
MECH 211	3
MECH 251	2
PHYSICS 201	3
PHYSICS 211	1
<i>Second Term</i>	<i>Credits</i>
Biological Sciences [BSCI]	3 or 4
MATH 315	3
MECH 212	3
MECH 215	3
PHYSICS 202	3
PHYSICS 212	1
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
ENGLISH 402 [WRTG]	3
MECH 301	3
MECH 303	3
MECH 304	3
MECH 309 [M]	3
<i>Second Term</i>	<i>Credits</i>
MECH 310	4

	<p>MECH 314 3</p> <p>MECH 348 3</p> <p>MECH 404 3</p> <p>400-level MECH Option Courses/Technical Electives<sup>1</sup> 3</p> <p><b>Fourth Year</b></p> <p><i>First Term</i> <span style="float: right;"><i>Credits</i></span></p> <p>MECH 402 3</p> <p>MECH 414 3</p> <p>MECH 416 [M] 2</p> <p>400-level MECH Option Courses/Technical Electives<sup>1</sup> 6</p> <p><i>Second Term</i> <span style="float: right;"><i>Credits</i></span></p> <p>Diversity [DIVR] 3</p> <p>UCORE Inquiry<sup>1</sup> 3</p> <p>MECH 417 [CAPS] 3</p> <p>400-level MECH Option Courses/Technical Electives<sup>1</sup> 9</p> <hr/> <p><b>Footnotes</b></p> <p><sup>1</sup> Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.</p> <p><sup>2</sup> Technical Electives or 400-level MECH Option Courses: The program emphasizes fundamentals and provides flexibility in selecting a course of study through five technical electives. Students can either take any six elective courses (18 credits), provided they meet the prerequisites, or they can choose to take a set of related electives comprising an option area and additional electives of their choice. The following are the technical elective courses and option areas: (Option 1) Micro and Nanotechnology: MECH 431, 435, 438, 450; (Option 2) Design and Manufacturing: MECH 476, 477, 485, 489; (Option 3) Mechatronics: MECH 405, 467, 468; (Option 4) Renewable Energy: MECH 441, ECE 421, choice of two courses from MECH 405, 431, 439, 442, 450, 468.</p>
<b>Mechanical and Materials Engineering</b>	<p><b>Materials Science and Engineering (123 Credits)</b></p> <p>ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI</p> <p>Teal highlight represents a specified UCORE course from the set. Yellow highlight represents an open/elective UCORE course.</p> <p><b>First Year</b></p> <p><i>First Term</i> <span style="float: right;"><i>Credits</i></span></p> <p>CHEM 105 [PSCI] 4</p> <p>ENGLISH 101 [WRTG] 3</p>



MATH 171 [QUAN]	4
ME 116	2
MSE 201	3
<i>Second Term</i>	<i>Credits</i>
CHEM 106	4
HISTORY 105 [ROOT]	3
MATH 172	4
MSE 202	3
Technical Elective <sup>1</sup>	3
<b>Second Year</b>	
<i>First Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>2</sup>	3
MATH 220	2
MATH 273	2
ME 220	1
MSE 316	3
PHYSICS 201	3
PHYSICS 211	1
<i>Second Term</i>	<i>Credits</i>
Humanities [HUM]	3
UCORE Inquiry <sup>2</sup>	3
MATH 315	3
MSE 241	3
MSE 33X <sup>2</sup>	3
PHYSICS 202	3
PHYSICS 212	1
Complete Writing Portfolio	
<b>Third Year</b>	
<i>First Term</i>	<i>Credits</i>
ECONS 102 [SSCI]	3
MSE 302	3
MSE 321	3
MSE 323	2
MSE 413	3
STAT 370	3
<i>Second Term</i>	<i>Credits</i>

Biological Science [BSCI]	3
UCORE Inquiry <sup>2</sup>	3
MSE 318	3
MSE 320 [M]	3
MSE 33X <sup>3</sup>	3
Technical Elective <sup>1</sup>	3

#### Fourth Year

<i>First Term</i>	<i>Credits</i>
ENGLISH 402 [WRTG] [M]	3
ME 312	3
ME 416 [CAPS]	3
MSE Electives <sup>3</sup>	6

<i>Second Term</i>	<i>Credits</i>
Diversity [DIVR]	3
UCORE Inquiry <sup>2</sup>	3
MSE 425; or MSE 488 and ENGR 489	3
MSE Elective <sup>4</sup>	3
Technical Elective <sup>1</sup>	3
Complete Exit Survey	

#### Footnotes

<sup>1</sup> Technical Elective (Minimum of 9 credits, of which 3 must be upper-division or 500 level): Any upper-division CE, CH E, CHEM, CPT S, E E, MATH, ME, MSE, or PHYSICS course not used to fulfill other requirements (excluding ME 416), CE 211, and 215, EE 261, and 262, ME 212 and 216.

<sup>2</sup> Must complete 4 of these 5 UCORE categories: ARTS, BSCI, DIVR, EQJS, HUM.

<sup>3</sup> MSE 33X (6 credits): Choose from MSE 331, 332, or 333.

<sup>4</sup> MSE Elective (9 credits): Any 300, 400, or 500-level MSE course except MSE 499 not used to fulfill other requirements.

### Mechanical Engineering (124 Credits)

ARTS, BSCI, DIVR, EQJS, HUM, PSCI, SSCI

Teal highlight represents a specified UCORE course from the set.

Yellow highlight represents an open/elective UCORE course.

#### First Year

<i>First Term</i>	<i>Credits</i>
Arts [ARTS]	3
UCORE Inquiry <sup>1</sup>	3
CHEM 105 [PSCI]	4
ENGR 120	2
HISTORY 105 [ROOT]	3
MATH 171 [QUAN]	4

<i>Second Term</i>	<i>Credits</i>
Biological Science [BSCH]	3
UCORE Inquiry <sup>1</sup>	3
ECONS 102 [SSCI]	3
ENGLISH 101 [WRTG]	3
MATH 172	4
ME 116	2

**Second Year**

<i>First Term</i>	<i>Credits</i>
CE 211	3
CPT S 121, 131, or ME 241	3 or 4
MATH 220	2
MATH 273	2
PHYSICS 201	3
PHYSICS 211	1
STAT 370	3

<i>Second Term</i>	<i>Credits</i>
CE 215	3
MATH 315	3
ME 212	3
ME 216	2
ME 220	1
PHYSICS 202	3
PHYSICS 212	1
Complete Writing Portfolio	

**Third Year**

<i>First Term</i>	<i>Credits</i>
E E 261	3
E E 262	1
ME 301	3

ME 303	3
ME 313	3
MSE 201	3
<i>Second Term</i>	<i>Credits</i>
ENGLISH 402 [WRTG]	3
ME 304	3
ME 306	2
ME 316	3
ME 348	3
Restricted Elective <sup>2</sup>	3
<b>Fourth Year</b>	
<i>First Term</i>	<i>Credits</i>
Diversity [DIVR]	3
UCORE Inquiry <sup>1</sup>	3
ME 415 [M]	3
Concentration Courses <sup>3,4</sup>	6
Concentration Courses <sup>3,4</sup>	6
Restricted Elective <sup>2</sup>	3
<i>Second Term</i>	<i>Credits</i>
Humanities [HUM]	3
UCORE Inquiry <sup>1</sup>	3
ME 406 [M]	3
ME 416 [CAPS]	3
Concentration Course <sup>3,4</sup>	3
Complete Exit Survey	
Complete Fundamentals of Engineering Exam	

#### Footnotes

<sup>1</sup> Must complete 4 of these 5 UCORE categories: ARTS, BSCI, DIVR, EQJS, HUM.

<sup>2</sup> Restricted Electives (at least 6 credits): Choose from ME 310 and 311 or ME 312, ME 401, ME 405.

<sup>3</sup> Concentration Paths (9 credits): General Concentration: Three technical electives which may include the remaining restricted elective. Thermo Fluids Concentration: Must take ME 405, and either ME 312 or 401 from the restrictive electives; two courses from ME 419, 431, 436, and 439; and one additional technical elective. Manufacturing Concentration: Must take ME 312, and either ME 401 or 405 from the restrictive electives; ME 474 and 475; and one more technical elective. Autonomous Systems Concentration (must complete CPT S 121, 131, or ME 241 prior to beginning this concentration):

Must take ME 401, and either ME 312 or 405 from the restrictive electives; two courses from CPT S 122 or 132, and ME 481; and one technical elective.

<sup>4</sup> Technical Electives for concentrations: Any 400-500-level ME, MSE, or EECS course not listed as a major requirement, and BIO ENGR 425.