

# ELECTRICAL ENGINEERING (FLAGSHIP TRACK A) - CLASS OF 2021

\*\*\*Flagship students see <http://web.uri.edu/chineseflagship/academics/> for curriculum requirements\*\*\*

## Freshman Year Fall Semester

Course Code	Description	Cr
CHM 101	General Chemistry Lec I (A1)	3
CHM 102	General Chemistry I Lab	1
ECN 201	Principles of Microeconomics (A2)	3
EGR 105	Foundations of Engineering I (A4)	1
MTH 141	Intro Calculus with Analytical Geometry (A1, B3)	4
CHN 111	Intensive Beginning Chinese I	4
		<b>16</b>

## Summer Semester

CHN 113	Intensive Intermediate Chinese I	4
CHN 114	Intensive Intermediate Chinese II	4
		<b>8</b>

## Sophomore Year Fall Semester

Course Code	Description	Cr
ELE 201	Digital Circuits Design	3
ELE 202	Digital Circuits Design Lab	1
MTH 362	Advanced Engineering Mathematics I	3
PHY 204	Elementary Physics II (A1)	3
PHY 274	Elementary Physics Lab II (A1)	1
	General Education Outcome(s)	3
CHN 215	Intensive Conversation and Comp. I	4
		<b>18</b>

## Junior Year Fall Semester

Course Code	Description	Cr
ELE 313	Linear Systems	3
ELE 331	Intro to Solid State Devices	4
ELE 338	Electronics I	3
ELE 339	Electronics I Lab	1
MTH 451 or ISE 311	Intro to Probability and Statistics <i>or</i> Probability and Statistics for Engineers	3
CHN 315	Intensive Adv.CHN for Flag. I	4
		<b>18</b>

## Semester Abroad

Course Code	Description	Cr
CHN 4XX		8
	Approved Professional Elective**	3
	General Education Outcome(s)*	3
	General Education Outcome(s)*	3
		<b>17</b>

## Senior Year Fall Semester

Course Code	Description	Cr
ELE 400	Intro to Professional Practice	1
ELE 480	Capstone Design I (D1)	3
	Approved Professional Elective**	4
	Approved Professional Elective**	3-4
	General Education Outcome(s)*	3
EGR 413	Advanced Technical Chinese	4
		<b>18-19</b>

## Freshman Year Spring Semester

Course Code	Description	Cr
CSC 200	Computer Problem Solving	4
EGR 106	Foundations of Engineering II (A4)	2
ELE 101	Intro to Electrical Engineering	1
MTH 142	Intermed Calc with Analytic Geom (B3)	4
PHY 203	Elementary Physics I (A1)	3
PHY 273	Elementary Physics Lab I (A1)	1
CHN 112	Intensive Elementary Chinese II	4
		<b>19</b>

## Sophomore Year Spring Semester

Course Code	Description	Cr
ELE 205	Microprocessors	2
ELE 206	Microprocessor Lab	1
ELE 212	Linear Circuit Theory	4
ELE 215	Linear Circuits Lab	1
MTH 243	Calculus for Funcs. of Sev. Vars. (A1, B3)	3
PHY 205	Elementary Physics III Lec (A1, B3)	3
PHY 275	Elementary Physics III Lab (A1, B3)	1
CHN 216	Intensive Conversation and Comp. II	4
		<b>19</b>

## Junior Year Spring Semester

Course Code	Description	Cr
ELE 301	Electronic Design Automation	3
ELE 302	Electronic Design Automation Lab	1
ELE 314	Linear Systems and Signals	3
ELE 322	Electromagnetic Fields I	4
ELE 343	Electronics II	3
ELE 344	Electronics II Lab	1
CHN 316	Intensive Adv.CHN for Flag. II	4
		<b>19</b>

## International Internship Semester

Course Code	Description	Cr
CHN 497/498	Language Study Abroad	3-6
		<b>3-6</b>

## Senior Year Spring Semester

Course Code	Description	Cr
ELE 481	Capstone Design II	3
	Approved Professional Elective**	3-4
	General Education Outcome(s)*	3
	General Education Outcome(s)*	3
	General Education Outcome(s)*	3
CHN 4XX or EGR	Chinese Lit/Civilization or Approved professional elective**	3-4
		<b>18-19</b>

**Specified Math, Science, and Engineering Courses**

Introductory Engineering					
Sem	Course	Cr	Grade	QP	Note
	EGR 105 (A4)	1			
	EGR 106 (A4)	2			
		3			

Engineering Science and Design (Major)					
Sem	Course	Cr	Grade	QP	Note
	ELE 101	1			
	ELE 201	3			
	ELE 202	1			
	ELE 205	2			
	ELE 206	1			
	ELE 212	4			
	ELE 215	1			
	ELE 301	3			
	ELE 302	1			
	ELE 313	3			
	ELE 314	3			
	ELE 322	4			
	ELE 331	4			
	ELE 338	3			
	ELE 339	1			
	ELE 343	3			
	ELE 344	1			
	ELE 400	1			
	ELE 480 [capstone] (D1)	3			
	ELE 481 [capstone]	3			
		46			

Mathematics					
Sem	Course	Cr	Grade	QP	Note
	MTH 141 (A1 & B3)	4			
	MTH 142 (B3)	4			
	MTH 243 (A1 & B3)	3			
	MTH 362	3			
	MTH 451 or ISE 311	3			
		17			

Natural Sciences					
Sem	Course	Cr	Grade	QP	Note
	CHM 101 (A1)	3			
	CHM 102	1			
	PHY 203 (A1)	3			
	PHY 273 (A1)	1			
	PHY 204 (A1)	3			
	PHY 274 (A1)	1			
		12			

**Professional Elective					
Sem	Course	Cr	Grade	QP	Note
		4			
		3-4			
		3-4			
		3-4			
		13-16			

Computer Science					
Sem	Course	Cr	Grade	QP	Note
	CSC 200	4			
		4			

\* **General Education Outcomes:** at least 40 credits must be completed. (A1-D1) must be met by at least three credits. A single course may satisfy one or two outcomes, and at least one course must be a "Grand Challenge". No more than twelve credits can be from the same course code except HPR. General education courses may also be used to meet requirements of your major(s) or minor(s) when appropriate.  
**\*\*Professional Electives:** Four (4) courses that satisfy *both* of the following: (a) **Three (3)** from ELE 401/402, 423, 425, 432, 435/436, 444/445, 447/448, 457, 458/459 of which at least **one (1)** must be from 401/402, 423, 432, 444/445, 447/448, and at least **one (1)** must include a lab component (401/402, 435/436, 444/445, 447/448, 458/459). (b) The **fourth** course must be from: an additional course from (a) above; BME/ELE 461; ELE 405/406, 408/409, 437, 438, 470; or with prior approval of the ECBE department chairperson, any 300- or 400-level College of Engineering course not required by the ELE major.

Chinese Language Requirements					
Sem	Course	Cr	Gr	QP	
<b>Six (6) credits in Chinese Literature and Civilization. At least 3 of these credits must be at the 400-level. Students in the Chinese Language Flagship Program may take CHN 315 and 316 or CHN 315H and 316H in lieu of the 6 credits at the 400-level and 6 credits in literature and civilization requirement.</b>					
	CHN _____	3			
	CHN 4 _____	3			
<b>18 Credits of CHN electives to reach 30 major credits</b>					
	CHN _____	3			
	CHN _____	3			
	CHN _____	3			
	CHN _____	3			
	CHN _____	3			
	CHN _____	3			
<b>Choose six (6) credits in Chinese/Asian History, Politics, Philosophy, or Arts from: HIS 171, 374; PHL 331; PSC 116*, 377; RLS 131; THE 382</b>					
		3 or 4			
		3 or 4			
<b>CHN 101, 102, and 111 will not count toward major requirements. At least 6 CHN credits must be at the 400-level.</b>					
<b>* PSC 116 approved for general education credit</b>					

General Education Outcome Audit		
	Course	Credit
<b>Knowledge</b>		
A1. STEM	CHM & PHY (see above)	11
A2. Social & Behavioral Sciences	ECN 201	
A3. Humanities	CHN 205/206 (suggested)	3
A4. Arts & Design	EGR 105 & 106	3
<b>Competences</b>		
B1. Write Effectively		
B2. Communicate Effectively		
computational strategies	MTH (see above)	11
B4. Information literacy		
<b>Responsibilities</b>		
C1. Civic knowledge & responsibi		
C2. Global responsibilities	CHN 205/206 (suggested)	--
C3. Diversity and Inclusion		
<b>Inegrate &amp; Apply</b>		
D1. Ability to synthesize	ELE 480	3
<b>Grand Challenge</b>		
G. Check that at least one course of your 40 credits is an approved "G" course		
Total General Education Outcome Credits		40