

# B.S. in Electrical Engineering Enhanced Academic Plan

## B.S. in Electrical Engineering - CWILT

Recommended Courses				
Fall Semester 1	Interim Semester 1	Spring Semester 1	Career Planning and Preparation	R.E.A.L. Experience
PHY 292 & PHY 292D General Physics I and General Physics I Lab	GES 160 Inquiry Seminar	PHY 296 & PHY 297 General Physics II and General Physics II Lab	<b>PHASE 1: EXPLORE</b>	
MAT 124M Calculus 1		MAT 125 Calculus 2	<i>Explore self, careers, &amp; God's call</i>	Create your R.E.A.L. Portfolio
GES 140 Introduction to Wellbeing		GES 130 Christianity Western Culture	Take a Career Assessment	Consider joining a club or ministry of interest
GES 125 Introduction to the Creative Arts		BIB 101 Introduction to the Bible Artistic Experience (A) course	Research Careers: O*Net, Candid Careers, & informational interviews w/ Alums Gain Experience: Part-time job; Campus Involvement (e.g. student club); Volunteering	Consider finding a mentor
<b>15</b>		<b>3</b>		<b>16</b>

**MILESTONES: Consider study abroad options**

Recommended Courses				
Fall Semester 2	Interim Semester 2	Spring Semester 2	Career Planning and Preparation	R.E.A.L. Experience
ENR 260 Careers in Engineering and Physics Seminar	ENR 160 Introduction to Engineering	MAT 222 Differential Equations	<b>PHASE 1&amp;2: EXPLORE/EXPERIENCE</b>	Continue adding artifacts and reflections to your R.E.A.L. Portfolio.
MAT 223 Multivariable Calculus		PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	<i>Finalize major if necessary &amp; begin gaining experience</i>	Consider taking a leadership position with a student club.
COS 205 Scientific Computing		Science, Technology, and Society (K) course	Create/update Resume & LinkedIn	Consider going on a spring break mission trip.
PHY 302 & PHY 303 Electronics and Electronics Lab		Second Language (S) course *1	Build professional network (e.g. informational interviews)	
Contemporary Western Life and Thought (L) course		Cross-cultural Experience (Z) Course	Attend Spring Career Fair	
<b>14</b>		<b>3</b>	Obtain Internship or relevant job by summer	

**MILESTONES: Consider doing an online course over the summer**

Recommended Courses				
Fall Semester 3	Interim Semester 3	Spring Semester 3	Career Planning and Preparation	R.E.A.L. Experience
ENR 320 Mathematical Methods in Physics and Engineering	World Cultures (U) course	PHY 332 & PHY 333 Optics and Optics Lab	<b>PHASE 2: EXPERIENCE</b>	Review your R.E.A.L. Portfolio and prepare to make it public.
ENR 316 & ENR 317 Analog Circuitry and Design and Analog Circuitry Design Lab		ENR 352 & ENR 353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	<i>Use experineces to narrow down career choice &amp; develop relevant skills</i>	Consider studying abroad.
PHY 400 Electricity and Magnetism		ENR 306 & ENR 307 Digital Logic and Design and Digital Logic and Design Lab	Participate in Fall & Spring Recruiting to obtain an internship	Consider applying for a Student Leadership Position in Student Life.
THE 201 Christian Theology		Interpreting Biblical Themes (J) Course	Schedule a Mock Interview	Consider being a TA for a favorite class.
<b>15</b>		<b>3</b>	Explore Grad Schools & Take Entrance Exams (e.g. GRE) if necessary	
			Expand Professional Network	

**MILESTONE: A minimum 3.2 GPA in your major is a good goal to strive for**

Recommended Courses				
Fall Semester 4	Interim Semester 4	Spring Semester 4	Career Planning and Preparation	R.E.A.L. Experience
ENR 326 Circuit Analysis Simulations	Interim Off	ENR 446 & ENR 447 Control Systems and Control Systems Lab	<b>PHASE 3: EXECUTE</b>	Continue updating your public R.E.A.L. Portfolio with relevant experiences and reflection.
ENR 336 Signals and Systems		ENR 436 & ENR 437 Microprocessors and Microprocessors Lab	<i>Execute an effective job or grad school search</i>	Consider mentoring an underclassman.
ENR 424 & ENR 425 Materials and Devices and Materials and Devices Lab		ENR 490 Engineering Design Project	Participate in Fall and Spring Recruiting	
ENR 465 Engineering Design Seminar		Contemporary Christian Issues (P) Course	Apply for Graduate School if necessary	
Comparative Systems (G) Course		Leisure and Lifetime Sport (Q) Course	Expand Professional Network	
<b>16</b>		<b>0</b>		<b>15</b>

**Total Credits: 130**

\*1 Students must complete through the second semester of a first year language course or equivalent (Check the catalog for details of this option.)

Most financial aid packages stipulate 12 credits/semester; Minnesota state grants are reduced when credit load falls below 15 credits/semester. (Interim credits may be split between fall and spring for state grant purposes only.)

# B.S. in Electrical Engineering Enhanced Academic Plan

## B.S. in Electrical Engineering - Humanities

Recommended Courses				
Fall Semester 1	Interim Semester 1	Spring Semester 1	Career Planning and Preparation	R.E.A.L. Experience
PHY 292 & PHY 292D General Physics I and General Physics I Lab	GES 147 Humanities II: Renaissance and Reformation	PHY 296 & PHY 297 General Physics II and General Physics II Lab	PHASE 1: EXPLORE	Create your R.E.A.L. Portfolio
MAT 124M Calculus 1		MAT 125 Calculus 2	<i>Explore self, careers, &amp; God's call</i>	Consider joining a club or ministry of interest
GES 140 Introduction to Wellbeing		BIB 101 Introduction to the Bible	Take a Career Assessment	Consider finding a mentor
GES 145 Humanities I: Greco-Roman through Middle Ages Leisure and Lifetime Sport (Q) course		GES 244 Humanities III: European Enlightenment and American Culture to 1877	Research Careers: O*Net, Candid Careers, & informational interviews w/ Alums	
16	4	15	Gain Experience: Part-time job; Campus Involvement (e.g. student club); Volunteering	
<b>MILESTONES: Consider study abroad options</b>				
Recommended Courses				
Fall Semester 2	Interim Semester 2	Spring Semester 2	Career Planning and Preparation	R.E.A.L. Experience
MAT 223 Multivariable Calculus	ENR 160 Introduction to Engineering	MAT 222 Differential Equations	PHASE 1&2: EXPLORE/EXPERIENCE	Continue adding artifacts and reflections to your R.E.A.L. Portfolio.
GES 246 Humanities IV: Modern and Contemporary Western Culture		PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	<i>Finalize major if necessary &amp; begin gaining experience</i>	Consider taking a leadership position with a student club.
PHY 302 & PHY 303 Electronics and Electronics Lab		COS 205 Scientific Computing	Create/update Resume & LinkedIn	Consider going on a spring break mission trip.
World Cultures (U) course		Second Language (S) course *1	Build professional network (e.g. informational interviews)	
14	3	15	Attend Spring Career Fair	
			Obtain Internship or relevant job by summer	
<b>MILESTONES: Consider doing an online course over the summer</b>				
Recommended Courses				
Fall Semester 3	Interim Semester 3	Spring Semester 3	Career Planning and Preparation	R.E.A.L. Experience
ENR 320 Mathematical Methods in Physics and Engineering	Comparative Systems (G) course	PHY 332 & PHY 333 Optics and Optics Lab	PHASE 2: EXPERIENCE	Review your R.E.A.L. Portfolio and prepare to make it public.
ENR 316 & ENR 317 Analog Circuitry and Design and Analog Circuitry Design Lab		ENR 352 & ENR 353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	<i>Use experineces to narrow down career choice &amp; develop relevant skills</i>	Consider studying abroad.
PHY 400 Electricity and Magnetism		ENR 306 & ENR 307 Digital Logic and Design and Digital Logic and Design Lab	Participate in Fall & Spring Recruiting to obtain an internship	Consider applying for a Student Leadership Position in Student Life.
ENR 260 Careers in Engineering and Physics Seminar Science, Technology, and Society (K) course		Interpreting Biblical Themes (J) course	Schedule a Mock Interview	Consider being a TA for a favorite class.
16	3	15	Explore Grad Schools & Take Entrance Exams (e.g. GRE) if necessary	
			Expand Professional Network	
<b>MILESTONE: A minimum 3.2 GPA in your major is a good goal to strive for</b>				
Recommended Courses				
Fall Semester 4	Interim Semester 4	Spring Semester 4	Career Planning and Preparation	R.E.A.L. Experience
ENR 326 Circuit Analysis Simulations	Interim Off	ENR 446 & ENR 447 Control Systems and Control Systems Lab	PHASE 3: EXECUTE	Continue updating your public R.E.A.L. Portfolio with relevant experiences and reflection.
ENR 336 Signals and Systems		ENR 436 & ENR 437 Microprocessors and Microprocessors Lab	<i>Execute an effective job or grad school search</i>	Consider mentoring an underclassman.
ENR 424 & ENR 425 Materials and Devices and Materials and Devices Lab		ENR 490 Engineering Design Project	Participate in Fall and Spring Recruiting	
ENR 465 Engineering Design Seminar		Contemporary Christian Issues (P) course	Apply for Graduate School if necessary	
13	0	15	Expand Professional Network	
<b>Total Credits: 129</b>				
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