



**WRIGHT STATE  
UNIVERSITY**

# B.S. in Computer Engineering

## Program Guide

Student's Name \_\_\_\_\_ UID# \_\_\_\_\_

First Year	Qtr	Grade	(49 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
CEG 233	4.0	_____	Linux and Windows .....	(CS 240, Note 1, 2, 3)	a	a	X	•
CEG 260	4.0	_____	Digital Circuits .....	(CS 240)	a	a	X	•
CS 240	4.0	_____	Computer Programming I .....	(MPL 3)	X	a	a	a
CS 241	4.0	_____	Computer Programming II .....	(CS 240)	a	X	a	a
CS 242	4.0	_____	Computer Programming III .....	(CS 241, MTH 257)	a	a	X	•
ENG 101	4.0	_____	Composition I .....		X	a	a	a
ENG 102	4.0	_____	Composition II .....	(ENG 101)	a	X	a	a
MTH 229	5.0	_____	Calculus I .....	(MTH 131 or MPL 7)	a	X	a	a
MTH 230	5.0	_____	Calculus II .....	(MTH 229)	a	a	X	a
MTH 257	3.0	_____	Discrete Mathematics .....	(Note 8, MTH 130 or MPL 5)	X	a	a	•
GEN ED	4.0	_____	General Education .....	(See WSU General Education requirements)	X	a	a	a
GEN ED	4.0	_____	General Education .....	(See WSU General Education requirements)	a	X	a	a
<b>Credit Hours Per Quarter in the Model Program .....</b>					<b>15</b>	<b>17</b>	<b>17</b>	<b>0</b>

Second Year	Qtr	Grade	(48 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
CEG 360	4.0	_____	Digital Systems Design .....	(CEG 260)	a	a	X	•
CS 400	4.0	_____	Data Structures and Algorithms .....	(CS 242, CEG 233)	X	a	a	•
EGR 335	3.0	_____	Technical Communications .....	(ENG 102)	a	X	a	•
MTH 231	5.0	_____	Calculus III .....	(MTH 230)	X	a	a	a
MTH 233	5.0	_____	Differential Equations (or MTH 235 Diff Equations with Matrix Algebra) .....	(MTH 231)	a	X	a	a
MTH 253	3.0	_____	Matrix Algebra .....	(MTH 230)	a	a	X	a
PHY 240	4.0	_____	Physics I .....	(MTH 229, PHY 200c)	X	•	a	•
PHY 200	1.0	_____	Physics Lab I .....	(PHY 240c)	X	•	a	•
PHY 242	4.0	_____	Physics II .....	(MTH 230, PHY 240, PHY 202c)	a	X	a	•
PHY 202	1.0	_____	Physics Lab II .....	(PHY 242c)	a	X	a	•
PHY 244	5.0	_____	Physics III .....	(MTH 230, PHY 242, PHY 204c)	•	a	X	•
PHY 204	1.0	_____	Physics Lab III .....	(PHY 244c)	•	a	X	•
GEN ED	4.0	_____	General Education .....	(See WSU General Education requirements)	a	X	a	a
GEN ED	4.0	_____	General Education .....	(See WSU General Education requirements)	a	a	X	a
<b>Credit Hours Per Quarter in the Model Program .....</b>					<b>14</b>	<b>17</b>	<b>17</b>	<b>0</b>

Third Year	Qtr	Grade	(48 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
CEG 320	4.0	_____	Computer Organization .....	(CS 242 or CEG 221, CEG 233)	X	•	a	•
CEG 433	4.0	_____	Operating Systems .....	(CEG 320, CS 400)	a	•	X	•
EE 301	4.0	_____	Circuits I .....	(PHY 242, EE 302c)	X	a	a	•
EE 302	1.0	_____	Circuits I Lab .....	(EE 301c)	X	a	a	•
EE 321	4.0	_____	Linear Systems I .....	(EE 301, EE 302)	a	X	a	•
EE 331	3.0	_____	Electronic Devices .....	(EE 301, EE 302)	a	a	X	•
EE 332	1.0	_____	Electronic Devices Lab .....	(EE 301, EE 302)	a	a	X	•
STT 3XX	3.0	_____	Statistics (Select from STT 360, STT 363, or ISE 301) .....	(varies by course)	X	a	a	•
Elective	4.0	_____	CS/CEG Technical Elective .....		X	a	a	•
Elective	4.0	_____	CS/CEG Technical Elective .....		a	X	a	•
Elective	4.0	_____	General Elective .....		a	X	a	a
Elective	4.0	_____	General Elective .....		a	a	X	a
GEN ED	4.0	_____	General Education .....	(See WSU General Education requirements)	a	X	a	a
GEN ED	4.0	_____	General Education .....	(See WSU General Education requirements)	a	a	X	a
<b>Credit Hours Per Quarter in the Model Program .....</b>					<b>16</b>	<b>16</b>	<b>16</b>	<b>0</b>

Fourth Year	Qtr	Grade	(46 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
CEG 402	4.0	_____	_____	Computer Networks..... (CS 242)	a	X	a	•
CEG 453	4.0	_____	_____	Embedded Systems ..... (CEG 360, CEG 320)	X	•	•	•
CEG 498	8.0	_____	_____	Team Projects I & II.....(Note 6)	X	X	a	•
CS 415	3.0	_____	_____	Social Implications of Computing..... (Note 5, ENG 102)	a	a	X	•
Elective	4.0	_____	_____	CS/CEG Technical Elective.....(Note 4)	a	X	a	•
Elective	4.0	_____	_____	CS/CEG Technical Elective.....(Note 4)	a	a	X	•
Elective	4.0	_____	_____	Math or Science ..... (Note 7, Note 9)	a	a	X	a
Elective	4.0	_____	_____	General Elective.....	X	a	a	a
Elective	4.0	_____	_____	General Elective.....	a	a	X	a
GEN ED	4.0	_____	_____	General Education.....(See WSU General Education requirements)	X	a	a	a
GEN ED	4.0	_____	_____	General Education.....(See WSU General Education requirements)	a	X	a	a
<b>Credit Hours Per Quarter in the Model Program .....</b>					<b>16</b>	<b>16</b>	<b>14</b>	<b>0</b>

## TOTAL PROGRAM CREDIT HOURS

**191.0**

### NOTES:

- In the right hand columns, (X) denotes the typical schedule for a full-time student, (a) denotes "available", and (•) denotes "not available".
- The course corresponding to the number in parentheses is a prerequisite. Such a number followed by "c", such as (PHY ###c), denotes a co-requisite (taken at the same time).
- Some programming experience is required in order to take CEG 233.
- Technical Elective – Some technical electives require additional prerequisites. All electives must be chosen from approved computer engineering general electives. Most Technical electives have CS 400 as a pre-requisite.
- Senior standing or permission is required to take CS 415.
- Team Projects (CEG 498) must be taken in consecutive terms. One course from approved package must be completed before beginning CEG 498. See an advisor.
- Math courses must be at least at the 200 level and excludes the following courses: MTH 228, MTH 290, MTH 310, MTH 343, MTH 344, MTH 345, MTH 348 and MTH 446.
- MTH 257 (Discrete Mathematics) is the entry level Math course for the BS degree program. Prerequisites Math courses such as MTH 126, MTH 127, MTH 128, MTH 129, MTH 130, or MTH 131 may be eligible to count as electives. See Advisor.
- Science course must be a course that is appropriate for science or engineering majors.

### General Education (Gen Ed) Checklist (Refer to the current catalog for additional description):

- Area 2: History – Select one (1) course: CLS 150, HST 101, HST 102, or HST 103.  
The non-Western World (WI) – Select one (1) Course: CSE/CST, RSE/RST, HLT 202, SW 272, or URS 200
- Area 3: Select two (2) courses from *different* Categories:  
Economics: EC 200 (some WI), EC 290 (WI)  
Political Science: PLS 200  
Psychology: PSY 105  
Sociology (WI): SOC 200, SOC 205
- Area 4: Select one (1) course from either category:  
Great Books (WI): CLS, ENG, PHY or REL 204  
Fine and Performing Arts: ART, MUS or TH 214, MUS 290, MP 131
- Additional courses from Area 2, 3, and 4 - total of 8 more hours  
Select one course from two of these three areas. Except for Area 2, the course selected must come from a different sub category than the courses(s) chosen to meet the area requirement. (See undergraduate catalog general education section for complete details)
- Area 6: Select one (1) course from following:  
EC 290, ISE 210 (recommended), PSY 110, URS 200

### General Electives See General Elective Policy

### Computer Science/Computer Engineering Technical Electives:

There are four elective packages; Architecture, Software, Control and Communications. See approved Computer Engineering elective sheet for list of approved electives. Choose 16 credit hours of courses from a single package. Elective packages must be approved by a department advisor prior to taking the first elective course. Students may propose alternate packages which provide a meaningful concentration.