



# ENGINEERING

Associate of Science (AS)

## Advising Sheet – Suggested Course Sequence

Student Name \_\_\_\_\_

Faculty Advisor \_\_\_\_\_

REQUIRED COURSES	CR	PRE-REQUISITE COURSES	APPROVED COURSE SUBSTITUTIONS	TERM I PLAN TO TAKE OR TAKEN ✓
SDV 101 Orientation to Engineering and Technologies	1		SDV 100	
ENG 111 College Composition I	3	See Placement Test Scores		
Math Elective Courses	14-20	Notes 1, 3		
EGR 120 Introduction to Engineering	2	MTH 161 (co-requisite) ENG 111 Readiness		
EGR 126 Computer Programming for Engineers	3			
CHM 111 General Chemistry I	4	Math Modules 1-9		
ENG 112 College Composition II	3	ENG 111		
PHY 241 General University Physics I	4	MTH 263		
PHY 242 General University Physics II	4	PHY 241, MTH 264		
Engineering Elective Courses	15	Notes 2, 3		
Social Behavioral Science Elective (choose 2): ECO 201 Principles of Macroeconomics ECO 202 Principles of Microeconomics HIS 112 History of World Civilization II PSY 200 Principles of Psychology PSY 230 Developmental Psychology SOC 200 Principles of Sociology	6	See Placement Test Scores		
Humanities Elective (choose 2): ART 101 History and Appreciation of Art I ART 102 History and Appreciation of Art II CST 100 Introduction to Public Speaking PHI 111 Logic PHI 220 Ethics	6			
<b>Total Credits For Program</b>	<b>65-71</b>			

### NOTES:

- Math Course Electives:** EGR majors are required to complete MTH 263 Calculus I, MTH 264 Calculus II, MTH 267 Ordinary Differential Equations, and at least one of MTH 265 Calculus III and MTH 266 Linear Algebra, as best fits their intended major and transfer university. Students should start taking MTH classes their first semester, with the highest level class for which they are prepared. Please see Math Electives List below for prerequisite information. **Please see your EGR faculty advisor.**
- EGR Course Electives:** Students earn an AS in Engineering by taking EGR 120, EGR 126, plus 15 credits from the Engineering Electives List. Please see EGR Electives List below. Specific sets of courses are designed for specific majors at transfer universities; taking different sets of courses may require additional coursework at the university. **Please see your faculty advisor.**
- Course Details:** EGR 248 may be taken out of numerical order with EGR 245 and EGR 246. EGR 270 may be taken out of numerical order with EGR 251/255 and EGR 261/263. EGR 251 and EGR 255 must be taken together. EGR 261 and EGR 263 must be taken together. EGR 270 may not be offered every semester. EGR course offerings are very limited in the summer session. Additional courses can be counted as an EGR Elective for majors such as Biomedical EGR, Chemical EGR, and Computer Science – these courses require a waiver. MTH 265, MTH 266, and MTH 267 may be taken in any order. VCCS accepts AP scores of 3 or higher, and CLEP; universities may not accept a score of 3 for transfer credit. **Please see your EGR faculty advisor.**
- Foreign Language:** Students who did not complete foreign language in high school and need it for their university program may substitute SPA 101 or FRE 101 for CST 100 only. **Please see your faculty advisor.**

Math Electives List – See Note 1	CR	Prerequisite Courses	Corequisite Courses	TERM I PLAN TO TAKE OR TAKEN ✓
MTH 161 Precalculus I	3	Math Modules 1-9		
MTH 162 Precalculus II	3	MTH 161		
MTH 167 Precalculus (equivalent to MTH 161 + MTH 162)	4	Math Modules 1-9		

For more information on this major, contact the Division of Engineering, Business and Public Services. 804.706.5121 (Chester Campus, Godwin Hall, G108) or 804.594.1480 (Midlothian Campus, Hamel Hall, H206).

MTH 263 Calculus I	4	MTH 162 or MTH 167		
MTH 264 Calculus II	4	MTH 263		
MTH 267 Ordinary Equations	3	MTH 264		
MTH 265 Calculus III or MTH 266 Linear Algebra	3-4	MTH 264		
<b>EGR Electives List— See Notes 2 and 3</b>	<b>CR</b>	<b>Prerequisite Courses</b>	<b>Corequisite Courses</b>	
EGR 124 Introduction to Engineering Methods	3	EGR 120, ENG 111 readiness		
EGR 140 Engineering Mechanics – Statics	3	EGR 120	MTH 263	
EGR 245 Engineering Mechanics-Dynamics	3	EGR 140, MTH 264, PHY 241		
EGR 246 Mechanics of Materials	3	EGR 140	MTH 264	
EGR 248 Thermodynamics for Engineers	3	EGR 120, CHM 111	MTH 263	
EGR 270 Fundamentals of Computer Engineering	4	EGR 126 (or instructor permission)		
EGR 251 Basic Electric Circuits I	3	EGR 120	MTH 267, PHY 241 EGR 255	
EGR 255 Electric Circuits Laboratory	1	EGR 120	MTH 267, PHY 241 EGR 251	
EGR 261 Signals and Systems ( <i>Spring only</i> )	3	EGR 251, MTH 267, EGR 126	EGR 263	
EGR 263 Signals and Systems Laboratory ( <i>Spring only</i> )	1	EGR 251, MTH 267, EGR 126	EGR 261	
CHM 112 General Chemistry II	4	CHM 111		