

# Mechanical, Civil, Industrial, Aeronautical, and Material Science Engineering Advising

Revised 5/2/16

Course #	Description	TCC	UW					WSU			Seattle U		St. Martins		EWU	WWU	Gonzaga U	
		A.S.	A/A	CEE	IE	MSE	ME	CE	MSE	ME	CEE	ME	CE	ME	ME	MFGE	CE	ME
Math& 151, 152, 153	Calculus 1, 2, 3	R	√	√	√	√	√	√	√	√	G	G	√	√	G	√	G	G
Math& 254	Calculus 4	S	√	√	√	√	√	G	G	√	G	G		G	G	G	G	G
Math 238	Differential Equations	R	√	G	G	√	G	G	G	√	G	G	G	G	G	G	G	G
Math 220	Linear Algebra	R	√	√	G	G	G	G	A	√	G	G		G		G	P	P
Phys& 221	Calc Based Physics 1	R	√	√	√	√	√	√	√	√	G	G	√	√	G	√	G	G
Phys& 222	Calc Based Physics 2	R	√	√	√	√	√	√	√	√	G	G	√	√	G	G	G	G
Phys& 223	Calc Based Physics 3	R	√	G	√	G	G	A	√	√	G	G	G	G	G	G	G	G
Chem& 161	General Chem 1	R	√	√	√	√	√	G	√	√	G	G	G	G	G	√	G	G
Chem& 162	General Chem 2	R	G	G	√	√	√	G	√	√			G	G				
Engr& 104 <sup>1</sup>	Intro to Design	S or Soc	A	A	A	A	A	G	G	G <sup>4</sup>		G				√		
Engr& 114 <sup>1</sup>	SolidWorks/Graphics	S or Hum				A	G			√	G	G	√	√	G		G	G
Engr 170	Intro to Material Sci	NA			G	√	G		G	G		G				√		G
Engr& 204	Electric Circuits	S	P	A	G	A	G	A	G	G <sup>4</sup>	P	P	P		G		P	G
Engr& 214	Statics	R	√	√	G	G	√	√	√	√	G	G	√	√	G	√	G	G
Engr& 215	Dynamics	R	√	√	G	A	√	G	G	√	G	G	G	G	G		G	G
Engr& 224	Thermodynamics	S	√	A	A	A	P	A	G	G	P	P	P	P	G		P	P
Engr& 225	Mech of Materials	R	√	√	G	G	√	G	G	√	G	G	G	G	G	G	G	G
Engr 240	Applied Numerical Methods	S	G	√M		√M	G	G	GM	√M					G			
CS 142	Java I	S		√M	G	√M			GM	√M	G					G	G	G
Engl& 101	English Comp 1	R	√	√	√	√	√	G	√	√	G	G	G	G	G	G	G	G
Engl& 235	Technical Writing	S	P	G	G	G	G	G	G	G			G 102 <sup>2</sup>	G 102 <sup>2</sup>			G 103 <sup>3</sup>	G 103 <sup>3</sup>
Hum and Soc Sci <sup>1</sup>		R	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

TCC Key: R = Required for the Associate of Science degree in Mechanical, Civil, Industrial, Aeronautical, Material Science NA = Not available at TCC

S = Specialization Course - a minimum of 4 courses required for the AS degree Sub = Engr 240 maybe substituted for CS 142 in AS

University Key: √ = Required for admission to the UW or WWU engineering department or certification into the WSU engineering department

G = Graduation requirement for the Bachelor of Science at the university. These are freshman/sophomore level courses so take now, if possible.

A = Meets an additional requirement- The university requires the selection of additional classes from specific lists for the BS.

P = Provides preparation for junior level university coursework and/or for the FE/EIT exam, the first step to being licensed.

M = Either Engr 240 or CS 142 meets the requirement, but the Engr 240 class is generally preferred.

Additional notes <sup>1</sup> Engr 104 is a Social Science. Engr 114 may count as either Specialization course or as a Humanities, but not both. The AS degree requires 15 credits of Humanities and Social Science. At least 5 credits must be a Humanities and 5 credits must be a Social Science. One class must meet the multicultural requirement. See approved lists. Universities may have specific course Humanities/Social Science course requirements.

<sup>2</sup> SMU requires English 102 instead of English 235. English 102 may be substituted for 235 in the AS degree.

<sup>3</sup> GU requires English 103 instead of English 235. English 103 may be substituted for 235 in the AS degree.

<sup>4</sup> Engr 104 will be waived by WSU if student transfers with 60+ credits. WSU Bremerton and Everett students must take all √ classes, Engr 204 and either Engr 240 or CS 142 (240 preferred) before transfer, or it will significantly delay graduation.

# **Mechanical, Civil, Industrial, Aeronautical, and Material Science Engineering Advising**

## **University of Washington**

Apply to both the University and the department. Aero/Astro, Mechanical, Civil and Industrial Engineering only admit fall quarter. Material Science Engineering admits Fall 2017 and Spring 2018, then only spring quarters. See university website for important deadlines.

University of Washington requires core requirements from high school. This applies even if high school was years ago! High school is considered to start in 9th grade. The core requirements are 4 years of English, 3 years of math, 3 years of social science, 2 years of foreign language, 2 years of lab science, and 0.5 years of art. If you did not complete these in high school, the requirements can be met through TCC courses. In general, 1 year of high school class = 5 credits of college work. See the University of Washington website for more details.

Sometimes we advise students to transfer before completing the AS degree, if they have completed all required courses for admission to their department, and completing the AS degree would impact their ability to transfer into a fall admission program. In these cases, we still encourage students to consider transferring courses back to TCC to complete the AS degree.

## **Washington State University**

WSU now offers Mechanical Engineering programs in Bremerton and Everett. Students should complete the AS degree before transferring to these programs. Any missing G courses could delay graduation. This program is in addition to the programs on the Pullman campus.

WSU is on the semester system, rather than the quarter system. They require application to the university, followed by certification into the program. See university website for important deadlines.

WSU requires a writing portfolio. Save samples of graded written work from TCC. Download forms from the WSU website, and ask your instructor to sign them. Do it as you are taking classes, rather than having to go back and ask instructors to evaluate your work again.

WSU gives advantages to completing the Associate of Science degree. Generally, courses designated as Humanities and Social Sciences by TCC will be accepted as Humanities and Social Sciences by WSU.

Take Econ& 202 as a social science elective at TCC. Chem& 161 and 162 will satisfy the chemistry requirement for ME and MatSci only if the full year engineering physics sequence is completed at the community college.

## **Seattle University**

SU does not require the AS degree, nor give any benefit for its completion. Take PHIL& 101 and HIST& 125, 127 OR 128 while at TCC. Civil & Environmental students should take Math& 146. Environmental engr students should take Bio 100 or 160.

## **Saint Martin's University**

SMU requires that you apply to the School of Engineering after being admitted to the university. SMU recommends that you complete an Associate of Arts and Sciences, Option A while simultaneously working on the Associate of Science degree so that General Education requirements are met. You may apply courses to both degrees, but will have to take additional coursework to complete both.

Take ENGL& 102 instead of ENGL& 235. You may substitute 102 for 235 in the AS degree. Many classes require minimum of C for transfer.

## **Eastern Washington University**

EWU has engineering programs in ME and EE, as well as a number of technology programs. Acceptance to the major is automatic once accepted to the University. EWU gives advantages to completing the AS degree. Students who complete the AS do not need to take 15 credits of the required 25 credits in the General Education Core requirements. All courses designated as Humanities and Social Sciences by TCC will be accepted as Humanities and Social Sciences by EWU, regardless of individual course transferability. No biological sciences, or macro/micro economics courses are required for graduation.

## **Western Washington University**

WWU's Manufacturing Engineering Technology (MET) program is being replaced by a Manufacturing Engineering (MFGE) program. Apply for admission to the program for spring of sophomore year (primary admission) or fall of junior year (secondary admission). Transfer earlier if you cannot complete Engr 170 before transfer. Completing the AS degree is not recommended, since it requires significant additional coursework. This program does not require Math 153, but that class is required at TCC for all 200 level math classes.

## **Gonzaga University**

GU offers CompE, EE, CE, ME, Engr Mgmt. AS degree not req'd. Take ENGL 103; PHIL& 101, 106, 215 & elective; CMST& 101 & MATH 210 while at TCC. One Java (CS 142) class is accepted.

**It is the student's responsibility to check university websites and meet with university advisors to ensure the accuracy of advising information.**