

Bioengineering, Chemical Engr, Biomass Resource Sci & Engr and Plastics & Composites Engr Advising

Revised 5/2/16

Course #	Description	TCC	UW			WSU		WWU
		A.S.	BioE	ChemE	BRSE	BioE	ChemE	PCE
Math& 151, 152	Calculus 1, 2	R	√	√	G	√	√	√
Math& 153	Calculus 3	R	√	√	G	√	√	
Math& 254	Calculus 4	S	√	√	G	G	√	
Math 238	Differential Equations	R	G	√	G	A	G	
Math 220	Linear Algebra	S	G	G	G	A	G	
Phys& 221	Calc Based Physics 1	R	√	√	G	√	√	√
Phys& 222	Calc Based Physics 2	R	√	√	G	√	√	G
Phys& 223	Calc Based Physics 3	R	A ²	G	G	A	G	G
Chem& 161	General Chemistry 1	R	√	√	G	√	√	√
Chem& 162	General Chemistry 2	R	√	√	G	√	√	√
Chem& 163	General Chemistry 3	R	√	√	G	√	√	see note
Chem& 261	Organic Chem 1	R	G ³	G	G	A	√	G
Chem& 262	Organic Chem 2	S		G	G	A	√	
Chem& 263	Organic Chem 3					A	A	
Biol& 221	Evolution, Ecology & Biodiv		√					
Biol& 222	Cellular & Molecular	S	√			√	A	A
Biol& 223	Bio of Organisms	S	√					
Engr& 104 ¹	Intro to Design	S or Soc	A	A	A	A		√
Engr& 114	SolidWorks/Graphics	Hum					A	
Engr 170	Intro to Material Sci	NA				A		√
Engr& 204	Electric Circuits	S						
Engr& 214	Statics	S				G		√
Engr& 224	Thermodynamics	S		P	P	A	A	
Engr& 225	Mechanics of Materials							G
Engr 240	Applied Numerical Methods	S	√	G M				
CS 142	Java 1	S		G M				G
Engl& 101	English Composition 1	R	√	√	G	G	G	G
Engl& 235	Technical Writing	S	G	G	G	G	G	
Hum and Soc Sci ¹		R	A	A	A	A	A	A

TCC Key: R = Required for the Associate of Science degree - BioEngineering/Chemical Engineering Specialization

S = Specialization Course - minimum of 4 courses. One must be Chem 262 or Bio 222

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

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.

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

Additional notes ¹ Engr 104 is a Social Science. Engr 114 is a Humanities. 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.

² Physics 123 not required for UW BioE unless choosing a specific pathway.

³ Chem& 261 is in process of becoming an admission requirement.

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University of Washington

Apply to both the University and the department. See university website for important deadlines.

The UW BioEngineering department admits fall and spring quarter. BioEngineering students should plan to transfer to UW the quarter prior to applying to the department. Meet with a UW advisor early.

The UW Chemical Engineering department will only admit students in spring quarter.

The UW Biomass Resource Science and Engineering program was formerly known as the Paper Science and Engineering program. It is small, targeted program. In the past, there have been a number of scholarships for this program, including scholarships that also allowed students to complete a bachelor's degree in chemical engineering. Entry to the program requires a 300 level thermodynamics course. Talk to UW department advisors for more information about meeting this requirement.

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.

We frequently advise students who are planning to transfer to UW in BioEngineering and Chemical Engineering to transfer before completing the AS degree, since staying to complete the AS degree may delay application to the department by a year. Just make sure that you have taken all the classes required for entry (V) and as many of the classes required for graduation (G) or (A) as possible. In these cases, we still encourage students to consider transferring courses back to TCC to complete the AS degree.

Washington State University

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.

The Chemical Engineering department at WSU generally offers ChE 201, Material and Energy Balances during the summer. This is a sophomore level course that is not offered at any CC. It is a great way to transition between TCC and WSU (<http://www.summer.wsu.edu/>)

Western Washington University

WWU's Plastics Engineering Technology (PET) program is being replaced by a Plastics and Composites Engineering (PCE) 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.

WWW PCE does not require Chem 163, but this class is a prereq for TCC's Chem 261.