

### Program of Study - Course Equivalencies

Pellissippi State Community College to the University of Tennessee Knoxville  
General Associate of Science to a Bachelor of Science in Chemical Engineering

#### Semester One

PSCC Course	PSCC Credits	University Course	Transfer Credits
COLL 1000 First Year Seminar	1	FYS LD elective	1
ENGL 1010 English Composition I	3	ENGL 101	3
History Elective	3	Vol Core GCI or GCUS- approved list in catalog	3
Approved Elective – ENS 1510 – Engineering Fundamentals I	4	EF 151	4
Social/Behavioral Sciences Elective	3	Vol Core SS- approved list in catalog	3
Mathematics Elective – MATH 1910 – Calculus I	4	MATH 141	4
	18		18

#### Semester Two

PSCC Course	PSCC Credits	University Course	Transfer Credits
COMM 2045 Public Speaking	3	VOL CORE Comm Studies 210	3
ENGL 1020 English Composition II	3	ENGL 102	3
Approved Elective – ENS 1520 – Engineering Fundamentals II	4	EF 152	4
ENS 1050 Computer Methods in Engineering	1	EF 105	1
Approved Elective – MATH 1920 – Calculus II	4	MATH 142	4
	15		15

#### Semester Three

PSCC Course	PSCC Credits	University Course	Transfer Credits
ENGL Literature Elective	3	VOL CORE AH- approved list in catalog	3
History Elective	3	VOL CORE GCI or GCUS- approved list in catalog	3
Natural Sciences Elective - CHEM 1110 – General Chemistry I)	4	CHEM 122/123	4
Approved Elective – MATH 2110 – Calculus III	4	Math 241	4
	14		14

#### Semester Four

PSCC Course	PSCC Credits	University Course	Transfer Credits
Humanities/Fine Arts Electives	6	VOL CORE AH- approved list in catalog	6
Social/Behavioral Sciences Elective	3	VOL CORE SS- approved list in catalog	3
Natural Sciences Elective - CHEM 1120 – General Chemistry II	4	CHEM 132/133	4
Approved Elective – MATH 2120 – Differential Equations	3	MATH 231	3
	16		16

#### Totals

PSCC Credits	63	University Credits	63
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Prerequisites may apply to specific courses; it is the student's responsibility to determine if prerequisites have been met. Prior to registering each semester, the student is expected to consult with his/her advisor. Check the PSCC and transfer university catalogs for updates and/or revisions.

#### Academic Plan

Required Courses for Completion of Bachelor's Degree from Tickle College of Engineering in Chemical Engineering at UTK.

University Course	Credits	Notes
<b>Semester Five</b>		
CBE 201 Material and Energy Balances	4	
CBE 235 Fundamentals of Molecular Bioengineering	3	
CHEM 210 Foundations of Analytical Chemistry	3	
CHEM 219 Foundations of Analytical Chemistry Lab	1	
BIO Option 1 <sup>1</sup>	3	
<b>Semester Six</b>		
CBE 240 Fluid Flow and Heat Transfer	4	
CBE 250 Appl of Chemical and Biomolecular Engineering Thermodynamics	3	
PHYS 231 Fundamentals of Physics: Electricity and Magnetism	3	

CHEM 260 Foundations of Organic Chemistry	3	
<b>Semester Seven</b>		
CBE 301 Appl of Numerical and Statistical Tech in Chemical Eng	4	
CBE 350 Chemical and Bioengineering Reactor Fund	4	
CHEM Option 1 <sup>3</sup>	3	
CBE 330 Advanced Chemical Engineering Thermodynamics	3	
<b>Semester Eight</b>		
CBE 320 Chemical and Biomolecular Engineering Lab	3	
CBE 340 Mass Transfer and Separation Processes	3	
CBE 360 Process Dynamics and Control	3	
Tech Elective <sup>2</sup>	3	
<b>Semester Nine</b>		
CBE 445 Separation Process Tech for the Pharmaceutical and Chemical Process Indstrs	3	
CBE 480 Equipment Design, Economic Methods, and Process Safety	4	
CBE 415 Advcd Chemical and Biomolecular Engineering Lab	3	
Tech Elective <sup>2</sup>	3	
<b>Semester Ten</b>		
CBE 488 Honors: Design Intern in Green Eng <b>or</b> CBE 490 Process Design and Econ Analysis	3	
Tech Elective <sup>2</sup>	3	
	UTK Total: 72	PSCC +UTK= Combined Total 135

#### Additional Information (such as residency or capstone requirements)

**NOTE:** Transfer students, including internal University of Tennessee, Knoxville, transfers, must meet the minimum requirements stated below to be considered for admission to a major within the college. These minimum standards for consideration do not guarantee being admitted to the major. The final admission decision for the major resides with the department head or designee.

- Must have earned a minimum 2.8 cumulative average and a C or better in each of these specific courses, or their equivalent: ENGL 101\*, CHEM 122\* and CHEM 123\* formerly CHEM 120\* (for Computer Science

students: COSC 101 and COSC 102 or equivalents), and MATH 132\* or MATH 141\* (and subsequent courses in the three sequences, if taken).

- If the student has completed any physics course, he/she must have earned a grade of C or better.
- The overall record will be evaluated for quality and seriousness of purpose. An excessive number of withdrawals, incompletes, repeated courses, or failures may result in denial.
- Any University of Tennessee, Knoxville, student desiring association with one of the departments in the Tickle College of Engineering should go to the Engineering Advising Office. An advising session is held with the major items of consideration being the same as for external transfer students.
- If external transfer students are denied admission to the Tickle College of Engineering, the student must contact Undergraduate Admissions to declare a new major for admission to UT.

<sup>1</sup>**Bio Option I:** [BCMB 230](#), [BCMB 311](#), [BCMB 321](#), [BCMB 401](#), [BCMB 402](#), [BCMB 412](#), [BCMB 415](#); [BIOL 220-BIOL 229](#), [BIOL 240](#), [BIOL 260-BIOL 269](#); [BIOL 280](#); [MICR 210](#)<sup>\*</sup>, [MICR 321](#), [MICR 329](#).

<sup>2</sup>One technical elective must be a chemical and biomolecular engineering course, with the exclusion of CBE 457. MSE 201 or 207 can be used as a technical elective, if not used to satisfy Chem Option 1.

<sup>3</sup>**Chem Option I:** Any 200-level or above BCMB courses; any 200-level or above CHEM courses; Environmental Engineering 554, 562; [MSE 201](#) or [MSE 207](#), [MSE 340](#) or [MSE 347](#), [MSE 360](#) or [MSE 367](#), any 200-level or above MICR courses.