

**COLLEGE OF ENGINEERING**  
**DEPARTMENT OF CHEMICAL ENGINEERING**  
**CHEMICAL ENGINEERING**

WALTERS STATE COMMUNITY COLLEGE

Degree: Associate of Science -- Emphasis -- Pre-Engineering

Freshman Year <sup>2</sup>		Sophomore Year			
CHEM 1110, 1111, 1120, 1121	General Chemistry I, II w/lab	8	CHEM 2010, 2011, 2020, 2021		
CISP 1010	Computer Science I OR		Organic Chemistry I, II w/lab	8	
CPSC 2170, 2171	Computer Programming Math/ Engineering	4 or 3	ENGL 2110 or 2120	American Literature I, II OR	
MATH 1910, 1920	Calculus I, II	8	ENGL 2410 or 2420	Western World Literature I, II	3
ENGL 1010, 1020	Composition I, II	6	MATH 2110	Calculus III	4
SPCH 1010	Fundamentals of Speech Communication	3	MATH 2120	Differential Equations	3
Approved Social/Behavioral Science Electives		6	HIST 2010, 2020 <sup>1</sup>	American History I, II	6
			PHYS 2110, 2111, 2120, 2121	Physics I, II w/ Lab	8
			Approved Humanities/Fine Arts Electives		6
	<b>Total</b>	<b>35-34</b>	<b>Total</b>	<b>38</b>	

*TENNESSEE TECHNOLOGICAL UNIVERSITY*

Advisor: Dr. Pedro Arce, Department Chairman - Prescott Hall 214, Phone: (931) 372-3297  
 (Recommend advisor be contacted prior to transfer.)

Junior Year <sup>3</sup>		Senior Year			
CHE 1520	Intro to Chemical and Biological Process Analysis and Scaling I	3	CHE 4131	Transfer Science III: Diffusion and Diffusive-Convection Mass Transfer	4
CHE 2020	Intro to Chemical and Biological Process Analysis and Scaling II	3	CHE 4210	Chemical Reaction Engineering	4
CHE 3010	Thermodynamics of Chem Processes	3	CHE 4240	CHE Capstone Lab	1
CHE 3021	Separations & Solution Thermodynamics	4	CHE 4410, 4420	Process Design I, II	6
CHE 3111	Transfer Science I: Conduction, Radiation, and Diffusion	4	CHE 4540	Process Dynamics & Control	3
CHE 3121	Transfer Science II: Fluid Mechanics	4	ChE Technical Electives <sup>5</sup>		6
CHE 3730	Chemical Engineering Operations	3	CHE 4910	Professionalism and Ethics in CHE	1
CEE 2110, ECE 3810 or BIOL 3200		3	CHEM 3510, 3520	Physical Chemistry	8
Technical Elective <sup>4</sup>		3			
	<b>Total</b>	<b>30</b>	<b>Total</b>	<b>33</b>	

1. HIST 2010, 2020 American History I, II are requirements for the AS degree at Walters State only.
2. Walters State students are required to fulfill computer competency requirements within the first thirty hours of college level work by either passing a computer competency exam or passing INFS 1010.
3. Students must apply to the CHE Fast-Track MS program by the end of their second junior term.
4. Three hours of Technical Electives can be from any of the following courses:
  - a. Any College of Engineering course at the 3000 or 4000 level.
  - b. Any BIOL/CHEM/MATH/PHYS at the 3000 or 4000 level.
  - c. CEE 2100
  - d. Any course with the prior approval of the ChE Undergraduate Program Coordinator.
  - e. Note that CEE 2110, BIOL 3200 and ECE 3810 cannot count both as a Technical Elective and as part of the CEE 2100/ ECE 3810/BIOL 3200 option.
5. Three hours of ChE Technical Electives must come from one of the following courses:
  - a. ChE 4330 – Polymer Engineering
  - b. ChE 4661 – Transport in Biochemical and Biological Processes
  - c. ChE 4950 – MEMS
  - d. ChE 4990 – Undergraduate Research

*Students must complete 60 hours at senior institution with 36 hours of upper-division credit at the 3000-4000 level.*