Name:	**UF ID:**
Email Address:	**Date:**

Bachelor of Science in Chemical Engineering Curriculum Plan (FTIC: F24)
Pre-Health Track

CP	***Course***	***Cr***	***Course Title***	***Term To Be Taken***	***Comments***
			Suggested Semester 1		
	MAC2311	*4*	*Analytic Geometry and Calculus 1, State Core GE-M**		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	CHM2045 or CHM2095	*3*	General Chemistry 1 *or* Chemistry for Engineers 1, *State Core GE-P***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	CHM2045L or CHM2095L	1	General Chemistry Laboratory *GE-P*		Take with CHM2045 or CHM2095 lecture
	BSC2010	3	*Integrated Principles of Biology 1*		
	BSC2010L	1	*Integrated Principles of Biology 1 Laboratory*		
	Quest 1	3	*Gen Ed Humanities from list GE-H*†*		*Swap with writing or another GE course (semester 8)*
	Term Credits	15			
			Suggested Semester 2		
	MAC2312	*4*	*Analytic Geometry and Calculus 2 GE-M**		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	CHM2046 or CHM2096	*3*	*General Chemistry 2 or* Chemistry for Engineers 2, *State Core GE-B/P***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	CHM2046L or CHM2096L	1	General Chemistry 2 Lab *GE-P*		Take with CHM2046 or CHM2096 lecture
	PHY2048	*3*	*Physics with Calculus 1 GE-P***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	PHY2048L	1	Laboratory for PHY2048 *GE-P*		Take with PHY2048 lecture
	BSC2011	3	*Integrated Principles of Biology 2*		
	BSC2011L	1	*Integrated Principles of Biology 2 Laboratory*		
	Term Credits	16			
			Suggested Semester 3		
1	***ECH3023***	***4***	***Material and Energy Balances - F, S, Sum C †***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	MAC2313	*4*	*Analytic Geometry and Calculus 3**		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	MAP2302	*3*	*Elementary Differential Equations***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
1	***COP2273***	*3*	***Python Programming for Engineers***		
1	**ECH2934**	1	**Professional Development of Chemical Engineers- *F, S***		Must be taken with ECH3023 and COP2273
	Term Credits	15			
			Suggested Semester 4		
2	***COT3502***	3	***Computer Model Formulation - F, S†***		Must earn a grade of C or better within two attempts (including drops and withdrawals); Prereq is COP2273.
2	***ECH3264***	*2*	***Elementary Transport Phenomena- F, S†***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
2	***ECH3101***	4	***Process Thermodynamics- F, S†***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	STA3032/STA2023	3	Engineering Statistics **or** Intro to Statistics		
	PHY2049	*3*	*Physics with Calculus 2 GE-P***		Must earn a grade of C or better within two attempts (including drops and withdrawals)
	PHY2049L	1	Laboratory for PHY2049		Take with PHY2049 lecture
	Term Credits	*16*			

** Pre-professional Calculus GPA, minimum overall GPA 2.5 required (note: a C+ = 2.33), all attempts calculated; individual class minimum grade: C.*
*** Pre-professional Critical Tracking course, minimum overall GPA 2.5 required (note: a C+ = 2.33); individual class minimum grade: C.*
† A minimum grade of "C" is required to pass this course.
Students must maintain satisfactory progress *(minimum GPA of 2.0)* in Chemical Engineering (ChE) courses and overall UF record.
Note: **ALL** critical tracking courses must be completed with a *minimum grade of C within two attempts (including drops and withdrawals) by the end of the fifth tracking semester* (excluding summers) to remain on track for the major.

CP	Course	Cr	Course Title	Term To Be Taken	Comments
			Suggested Semester 5		
3	**ECH3203**	**3**	**Fluid and Solid Operations - F, S†**		Must earn a grade of C or better within two attempts (including drops and withdrawals)
3	**ECH3223**	**3**	**Energy Transfer Operations - F, S†**		Must earn a grade of C or better within two attempts (including drops and withdrawals)
3	**ECH4123**	**3**	**Phase and Chemical Equilibria – F, S**		
	ENC1101	3	Expository and Argumentative Writing State Core GE-C†		Must earn a grade of C or better for 6K words†
	CHM2210	3	Organic Chemistry 1†		
	EEL3003	3	Elements of Electrical Engineering – F, S, Sum A (or CGN 3710 Experiment & Instrumentation in Civil Engineering – F, S)		
	Term Credits	*18*	15 credits total if ENC1101 is satisfied by AP, IB, or dual enrollment or taken in the summer after semester 8		
			Suggested Semester 6		
4 or 5	**ECH4403**	**3**	**Separation and Mass Transfer Operations – F, S**		
4	**ECH4224L**	**2**	**Fluid and Energy Transfer Operations Lab – F, S✓♦**		To receive 6K words†, you must earn a C or better; Must immediately follow the completion of ECH3203 and ECH3223; Prerequisite is STA2023/STA3032.
4	**ECH4714**	**3**	**Chemical Process Safety – F, S†**		Must be taken before or with ECH4224L
	ENC3246	3	Professional Communication for Engineers GE-C		To receive 6K words†, you must earn a C or better; Must be taken before or with ECH4224L
	CHM2211	3	Organic Chemistry 2		Must earn a grade of C or better in CHM2210.
	CHM2211L	2	Organic Chemistry 2 Lab		
	Term Credits	*16*			
			*Consider a Summer Internship/Co-op **or** Research Experiences for Undergraduates (REU)*		
			Suggested Semester 7		
5	**ECH4504**	**4**	**Chemical Kinetics and Reactor Design – F, S**		
5	**ECH4604**	**3**	**Process Economics and Optimization – F, S**		
	ECH4824	**2**	**Materials of Chemical Engineering – F, S**		Can be taken after ECH3264
	Quest 2	3	Quest 2 (Gen Ed Social & Behavioral Sciences) GE-S†✓		
	Tech Elective	4	BCH4024 (Introduction to Biochemistry and Molecular Biology) or CHM3218 (Organic Chemistry/Biochemistry 2)		
	Term Credits	*16*			
			Suggested Semester 8		
	ECH4323	3	Process Control Theory – F, S		Can be taken after COT3502; Must take with ECH4323L
	ECH4323L	1	Process Control Laboratory – F, S		Can be taken after COT3502; Must take with ECH4323
6	**ECH4644#**	**3**	**Process Design –F, S**		
	ChE Tech Elective	3	Chemical Engineering Technical Elective		Recommend BME3406
	ECH4404L	2	Separation and Mass Transfer Operations Lab – F, S✓		To receive 6K words†, you must earn a C or better. ECH4224L must be taken before.
	Gen Ed-HS	3	State Core Gen Ed Humanities GE-S†✓		
	Gen Ed-HS	3	State Core Gen Ed Social and Behavioral Sciences GE-S†✓		
			FE Exam		Licensure Process for Professional Engineers (PE)
	Term Credits	*18*			
	Total Credits	*130*			

† A minimum grade of "C" is required.
✓If not already completed, include GE-S or GE-H with Diversity or International component.
♦ A minimum grade of "C" is required to earn General Education Writing credit
 # IPPD Program- The option of a two-semester program in your senior year that can be substituted for 3 credits of Technical Elective with EGN4951 in Fall and 3 credits of ECH4644 with EGN4952 in Spring.

Semester Legend: F = Fall, S = Spring, and Sum = Summer
Take *Critical Path* courses 1-6 *in sequence* (1-3 minimum grade C within 2 attempts, a drop or withdrawal is an attempt). NO exceptions!
Technical Electives: 3000+ level courses in science, mathematics, or engineering with significant *technical quantitative* content.
Chemical Engineering Technical Elective (ChE Tech Elective): At least 3 credits of an ECH3XXX-level or higher course. This includes BME courses offered through ChE and approved ECH graduate courses. Students may count **up to 3 credits** of ChE non-course work (ECH4905, ECH4948, ECH4949, and EGN4912). All courses *must* be offered through the ChE Department.
Pre-Health Students: Find specialized advising and workshop information at www.advising.ufl.edu.