

# BS CHEMICAL ENGINEERING – 134 CR.

## Universal Tracking & Critical Path sequence

### Universal Tracking Terms 1 - 3

Suggested Semester 1 – UT1		
MAC2311	4	Analytic Geometry and Calculus 1, State Core GE-M*
CHM2045 or CHM2095	3	General Chemistry 1 or Chemistry for Engineers 1, State Core GE-P**
CHM2045L	1	General Chemistry Laboratory GE-P†
ABE2062	3	ABE 2062 Biology for Engineers, F (BSC 2010 equivalent)

Suggested Semester 2 – UT 2		
MAC2312	4	Analytic Geometry and Calculus 2 GE-M*
CHM2046 or CHM2096	3	General Chemistry and Qualitative Analysis or Chemistry for Engineers 1, State Core GE-B/P**
CHM2046L	1	General Chemistry & Qualitative Analysis Lab GE-P†
PHY2048	3	Physics with Calculus 1 GE-P**
PHY2048L	1	Laboratory for PHY2048 GE-P

Suggested Semester 3 – UT 3 (summer)		
MAC2313	4	Analytic Geometry and Calculus 3*
PHY2049	3	Physics with Calculus 2 GE-P**
PHY2049L	1	Laboratory for PHY2049†
CHM 2210	3	Organic Chemistry 1†

### Universal Tracking Term 4 and Critical Path Terms 1 - 3

Suggested Semester 4 – UT 4/CP 1		
ECH3023	4	Material and Energy Balances - F, S†
MAP 2302	3	Elementary Differential Equations**
ENC 3246	3	Professional Communication for Engineers GE-C†
CHM2211	3	Organic Chemistry 2
CHM2211L	2	Organic Chemistry Lab

Suggested Semester 5 – CP 2		
COT3502	4	Computer Model Formulation - F, S†
ECH3264	3	Elementary Transport Phenomena- F, S†
CHM4411 or PHY3513	4 or 3	Physical Chemistry or Thermal Physics
ECH4934	1	Chemical Engineering Professional Seminar- F, S

Suggested Internship/Coop/or other Experiential Learning

Suggested Semester 6- CP 3		
ECH3101	3	Process Thermodynamics - F, S†
ECH3203	3	Fluid and Solid Operations - F, S†
ECH3223	3	Energy Transfer Operations - F, S†
EEL 3003	3	Intro to Electrical Engineering – F, S, SS-C (or CGN 3710 Experiment & Instrumentation in Civil Engineering – F, S, SS-C)

### Critical Path Terms 4 – 6

Suggested Semester 7 – CP 4		
ECH 4123	3	Phase and Chemical Equilibria – F, S
ECH4714	3	Chemical Process Safety – F, S†
ECH 4403 CP 4 or CP 5 3 Separations and Mass Transfer – F, S		

Suggested Internship/Coop/or other Experiential Learning

Suggested Semester 8 – CP 5		
ECH4504	4	Chemical Kinetics and Reactor Design – F, S
ECH4604	3	Process Costing and Economic Analysis – F, S
ECH4824	2	Materials of Chemical Engineering – F, S
ECH4224L	2	Fluid and Energy Transfer Operations Lab – F, S†

Suggested Semester 9 – CP 6		
ECH4644	3	Process Design – F, S
ECH4323	3	Process Control Theory – F, S
ECH4323L	1	Process Control Laboratory – F, S
ECH4404L	2	Separation and Mass Transfer Operations Lab – F, S†

### Additional Courses – All 30 credits must be completed for BSChE

✓	Number	Cr	Name	Term Taken
	IUF1000	3	What is the Good Life? GE-H†	
	GenEd-HS	3	Humanities State Core GE-H†	
	GenEd-HS	3	Social & Behavioral Sciences State Core GE-S†	
	GenEd-HS	3	Social & Behavioral Sciences GE-S†	
	CHM3120	3	Introduction to Analytical Chemistry***	
	STA3032	3	Engineering Statistics****	
	TechEl	3	Technical Elective	
	TechEl	3	Technical Elective	
	TechEl	3	Technical Elective	
	ChETechEl	3	Chemical Engineering Technical Elective	

#### Notes:

\* Pre-professional Critical Tracking course, minimum overall gpa 2.5 required (note: a C+ = 2.33), all attempts calculated; individual class minimum grade: C.

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\*\*\* Petition to substitute a chemistry based course in Chemical Engineering, Chemistry, or Biochemistry.

\*\*\*\* Previous dual enrollment STA course, or AP exam score of 4 or 5, may substitute by petition.

† A minimum grade of "C" is required to pass this class

- ✓ Double check these pre-reqs: MAP 2302 for COT 3502; CHM 4411/PHY 3513 for ECH 3101; and ENC 3246 for ECH 4224L
- ✓ 6K Words : ENC 3246; ECH 4224L; ECH 4404L

**Notes (cont):**

- ✓ Take **Critical Path (CP) courses 1-6 in sequence** (CP 1-3 minimum grade C within 2 attempts, a drop or withdrawal is an attempt). **No exceptions.**
- ✓ **Technical Electives (TechEI):** 3000+ level courses in science, mathematics, or engineering with significant *technical/quantitative* content. Must be unique credit. **ROTC** courses will NOT count as Technical Electives.
- ✓ **Chemical Engineering Technical Elective (ChETechEI):** At least 3 cr. of ECH 3XXX+ course, includes BME courses offered through CHE, and ECH graduate courses. May include up to 3 credits of ChE non-course work (ECH 4905, ECH 4948, ECH 4949, EGN 4912) earned 1cr per term. Courses must be offered through the ChE Department.

**Pre-Health** – Specialized pre-health advising resources  
[www.advising.ufl.edu](http://www.advising.ufl.edu)

**Top ~~10~~ 12 Technical Electives**

ABE 4932 Bioprocess Engineering, F  
*Other Biomolecular Minor classes*

AOM 4521 Intro to Biofuels, SS-A, online

BCH 3025 Fundamentals of Biochem, F, S, SS-C, online

BCH 4024 Intro to Biochem/Molecular Biology, F, S, SS-C  
*Other pre-med science classes*

BME 3406 Intro to Biomolecular, S

CHM 4272 Organic Chemistry of Polymers, S  
*Other advanced/unique Chemistry classes*

COP 3502 Programming Fundamentals, F, S, SS-C  
*Other computer programming courses*

FOS 3042 Intro to Food Science, F, S, SS-A, online

MAS 3114 Linear Algebra, F, S, SS-A, SS-C, online  
*Other math classes*

Materials Science classes beyond EMA 3010

PHY 3101 Intro Modern Physics, F, S  
*Other Physics courses*

PKG 3001 Principles of Packaging, F  
*Other PKG courses*

• **Notes:**