

Chemical Engineering/Physics Dual BS - Curriculum Calendar

2014 and beyond, Division A, 07/02/09

Year-1 Fall

Course #	Course Title	SH
MATH 1241	Calc 1 for Eng	4
CHEM 1151/2	Chem 1 for Eng/Lab	5
XXXX xxxx	Arts&Humanities Elec	4
GE 1110	Eng Pr Sol Comp	4
GE 1000	Intro Eng'g	<u>1</u>
Total		18

Year-1 Spring

Course #	Course Title	SH
MATH 1242	Calc 2 for Engrs	4
PHYS 1151	Physics 1	4
PHYS 1152	Lab for Physics 1	1
GE 1111	Gen Eng'g 2	4
ENGL 1111	English 1	<u>4</u>
Total		17

Year-1 Summer-1

Course #	Course Title	SH	Summer-2
PHYS 1155	Physics 2	4	
PHYS 1156	Lab for Phy 2	1	
XXXX xxxx	Soc/Cult Elec	<u>4</u>	
Total		9	Vacation

Year-2 Fall

Course #	Course Title	SH
MATH 2321	Calc 3 for Eng	4
CHEM 2311†*	Organic Chem 1 (or Mod Phys-4SH)	5 0
CHEM 2308	ChE Calculations	4
PHYS 2371	Electronics	4
PHYS 2342	Elec. Lab	<u>0</u>
Total		17/16

Year-2 Spring

Course #	Course Title	SH
MATH 2341	Diff. Eq/Lin Alg	4
PHYS 2303†*	Modern Physics (or Orgo1/Lab-5SH)	4 0
CHME 2310/1	ChE Trans 1/Lab	4/1
CHME 2308	Intro to Eng Coop	1
CHME 2320	ChE Thermo 1	<u>4</u>
Total		17/18

Year-2 Summer-1

Year-2 Summer-1	Summer-2
Vacation	CO-OP

Year-3 Fall

CO-OP

Year-3 Spring

Course #	Course Title	SH
CHME 3322	ChE Thermo 2	4
CHME 3312/13	ChE Trans 2/Lab	4
CHEM 2313/14	Orgo Chem 2/Lab	5/0
BIOL 1111/12	Gen Bio / Lab	<u>5</u>
Total		18

Year-3 Summer-1

Course #	Course Title	SH	Summer-2
ENGL 3302	Tech Writing	4	
PHYS 3600	Adv Phy Lab 1	<u>4</u>	
Total		8	CO-OP

Year-4 Fall

CO-OP

Year-4 Spring

Course #	Course Title	SH
CHME 4510	ChE Kinetics	4
CHME 4701/2	ChE Design 1	5
PHYS 3601	Classical Dynamics	4
PHYS 3602	E and M	4
CHME 3000	Prof Issues	<u>1</u>
Total		18

Year-4 Summer-1

Year-4 Summer-1	Summer-2
Vacation	CO-OP

Year-5 Fall

CO-OP

Year-5 Spring

Course #	Course Title	SH
CHME 4703/4	ChE Design 2/Lab	5
XXXX xxxx	Technical Elective	4
PHYS 5115	Quantum Mech	4
PHYS 5318	Adv Phy Lab 2	<u>4</u>
Total		17

Chemical Engineering shown in **RED**
Physics classes shown in **BLUE**

Total Semester Hours: 139

(† scheduled in odd years only)

(‡ scheduled in even years)

(* scheduled in both Fall and Spring)

Year-2 -- PHYU303 Modern Physics is given in odd years only and both Fall and Spring of that year, e.g. SP09, FL09, SP11, FL11, etc.
CHM U311 Organic Chem-1 alternates with PHYU303, given in SP10, FL10, SP12, FL12, etc.

Year-5 -- Technical Elective can be CHE elective, etc., and Chem.Eng. faculty can specify the courses.

The Adv. Phy. Lab 2 includes control principles (LabView and computer-instrument interfacing) that provide chemical engineering students with a background in control that meets the ABET requirements (see the 2007-8 requirements below).

2007-8 ABET criteria:

These program criteria apply to engineering programs that include "chemical," "biochemical," "biomolecular," and similar modifiers in their titles.

1. Curriculum

The program must demonstrate that graduates have: thorough grounding in the basic sciences including chemistry, physics, and biology appropriate to the objectives of the program; and sufficient knowledge in the application of these basic sciences to enable graduates to design, analyze, and control physical, chemical, and biological processes, consistent with the program educational objectives