



CULLEN COLLEGE OF ENGINEERING  
OFFICE OF THE DEAN

RECEIVED OCT 24 2008

October 20, 2008

To: Undergraduate Council

From: David P. Shattuck  
Associate Dean of Undergraduate Programs

RE: Chemical Engineering Curriculum Change, Fall 2009

The Chemical Engineering Department requests the following prerequisite change for CHEE 4321 providing students with more economics background.

The department is requesting to require ECON 2304 Microeconomics as a prerequisite for CHEE 4321.


If a student has credit for:


ECON 2301 (Global Economic Principles)  
ECON 2305 (Macroeconomics Principles)

they may petition for credit to satisfy this prerequisite. ECON 2304 is also required by the Electrical and Computer Engineering Department.

No added hours to the total number of credit hours for the degree plan. ECON 2304 will count as three-credit hours towards the Social/Behavioral Core Requirements.

Supporting documentation attached.

  
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Cullen College of Engineering  
University of Houston

  
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Associate Professor, Electrical & Computer Engineering  
Cullen College of Engineering  
University of Houston

Cullen College of Engineering  
Department of Chemical Engineering

S222 Engineering Bldg 1  
Houston, TX 77204-4004

713/743-4300



Date: September 25, 2008

To: Undergraduate Curriculum Committee  
From: Chemical and Biomolecular Engineering Department  
Subject: Curriculum Change Effective Fall 2009



During our ABET Round Table discussion with the students, we discovered a need for students to have a background in economics. Specifically, in CHEE 4321, Chemical Engineering Design I, students are required to do cost analysis and make an economic projection for constructing chemical plants.

We would like to require **ECON 2304 Microeconomics** as a prerequisite for CHEE 4321. If a student has credit for:

ECON 2301 Global Economic Principles

ECON 2305 Macroeconomics Principles

they may petition for credit to satisfy this prerequisite. ECON 2304 is also required by the Electrical and Computer Engineering department.

There will be no added hours to our total number of credit hours. The ECON 2304 course will count as 3 credits hours towards the Social/Behavioral core requirements.

Effective Fall 2007

## FIRST YEAR

### *Fall Semester*

Course #	Course	Hrs.
CHEE 1131	The Challenge of Chem. E.	1
CHEM 1111	Fund. of Chemistry Lab I	1
CHEM 1331	Fund. of Chemistry I	3
ENGL 1303	English Composition I	3
HIST 1377	U.S. History to 1877	3
MATH 1431	Calculus I	4
POLS 1336	U.S. & Texas Politics	3

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### *Spring Semester*

Course #	Course	Hrs.
CHEM 1112	Fund. of Chemistry Lab II	1
CHEM 1332	Fund.. of Chemistry II	3
ENGL 1304	English Composition II	3
MATH 1432	Calculus II	4
PHYS 1321	University Physics I	3

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## THIRD YEAR

### *Fall Semester*

Course #	Course	Hrs.
	Adv. Chem. elective	3
CHEE 3333	Chem Eng. Thermo II	3
CHEE 3334	Stat./Numer. Tech.	3
CHEE 3363	Fluid Mech. for ChE	3
PHYS 1322	University Physics II	3
	Humanities Core	3

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### *Spring Semester*

Course #	Course	Hrs.
CHEE 3367	Proc. Model./Control	3
CHEE 3369	ChE Transport Proc.	3
CHEE 3462	Unit Operations	4
CHEE 3466	Bio & Physical Chem	4

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## SECOND YEAR

### *Fall Semester*

Course #	Course	Hrs.
CHEE 1331	Computing for Engineers	3
CHEE 2331	Chemical Processes	3
CHEM 3331	Fund. of Organic Chem. I	3
MATH 2433	Calculus III	4
POLS 1337	U.S. Government	3

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### *Spring Semester*

Course #	Course	Hrs.
CHEE 2332	Chem. Eng. Thermo. I	3
		3
CHEE 3300	Materials Sci. & Eng.	3
CHEM 3221	Fund. of Org. Chem. Lab	2
CHEM 3332	Fund. of Organic Chem. II	3
ENGI 2304	Technical Communications	3
MATH 3321	Engineering Math	3

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## FOURTH YEAR

### *Fall Semester*

Course #	Course	Hrs.
CHEE 4321	ChE Design I	3
CHEE 4361	ChE Practices	3
CHEE 4367	Chem. Reaction Eng.	3
HIST 1378	US Hist. since 1877	3
CHEE 4366	Biomolecular Eng.	3
	Visual/Performing Arts core	3

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### *Spring Semester*

Course #	Course	Hrs.
	Adv. Sci. elective	
CHEE 4322	ChE Design II	3
	Social & Behavior Science core	3
	Technical elective	3
	Technical elective	3

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Effective Fall 2009

**FIRST YEAR**

*Fall Semester*

Course #	Course	Hrs.
CHEE 1131	Chem. Engng. Challenges	1
CHEM 1111	Fund. of Chemistry Lab	1
CHEM 1331	Fundam. of Chemistry	3
ENGL 1303	English Composition I	3
HIST 1377	U.S. History to 1877	3
MATH 1431	Calculus I	4
POLS 1336	U.S. & Texas Politics	3

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*Spring Semester*

Course #	Course	Hrs.
CHEM 1112	Fund. of Chemistry Lab	1
CHEM 1332	Fundam. of Chemistry	3
ENGL 1304	English Composition II	3
MATH 1432	Calculus II	4
PHYS 1321	Engineering Physics I	3

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**THIRD YEAR**

*Fall Semester*

Course #	Course	Hrs.
	Adv. Chem. elective	3
CHEE 3333	ChE Thermo. II	3
CHEE 3334	Anal./Numer. Techn.	3
CHEE 3363	Fluid Mech. for ChE	3
PHYS 1322	Engr. Physics II	3
ECON 2304		3

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*Spring Semester*

Course #	Course	Hrs.
CHEE 3367	Proc. Mod./Control	3
CHEE 3369	ChE Transport Proc.	3
CHEE 3462	Unit Operations	4
CHEE 3466	Bio & Physical Chem	4

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**SECOND YEAR**

*Fall Semester*

Course #	Course	Hrs.
CHEE 1331	Computing for Engineers	3
CHEE 2331	Chemical Processes	3
CHEM 3331	Fund. of Organic Chem. I	3
MATH 2433	Calculus III	4
POLS 1337	U.S. Government	3

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*Spring Semester*

Course #	Course	Hrs.
CHEE 2332	Chem. Eng. Thermo. I	3
CHEE 3300	Mat'l Science & Engr.	3
CHEM 3221	Fund. of Org. Chem. Lab	2
CHEM 3332	Fund. of Organic Chem. II	3
ENGI 2304	Technical Communications	3
MATH 3321	Engineering Mathematics	3

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**FOURTH YEAR**

*Fall Semester*

Course #	Course	Hrs.
CHEE 4321	ChE Design I	3
CHEE 4361	ChE Practices	3
CHEE 4367	Chem. Reaction Eng.	3
HIST 1378	US Hist. since 1877	3
CHEE 4366	Biomolecular Engr	3
	Vis./Perf. Arts core	3

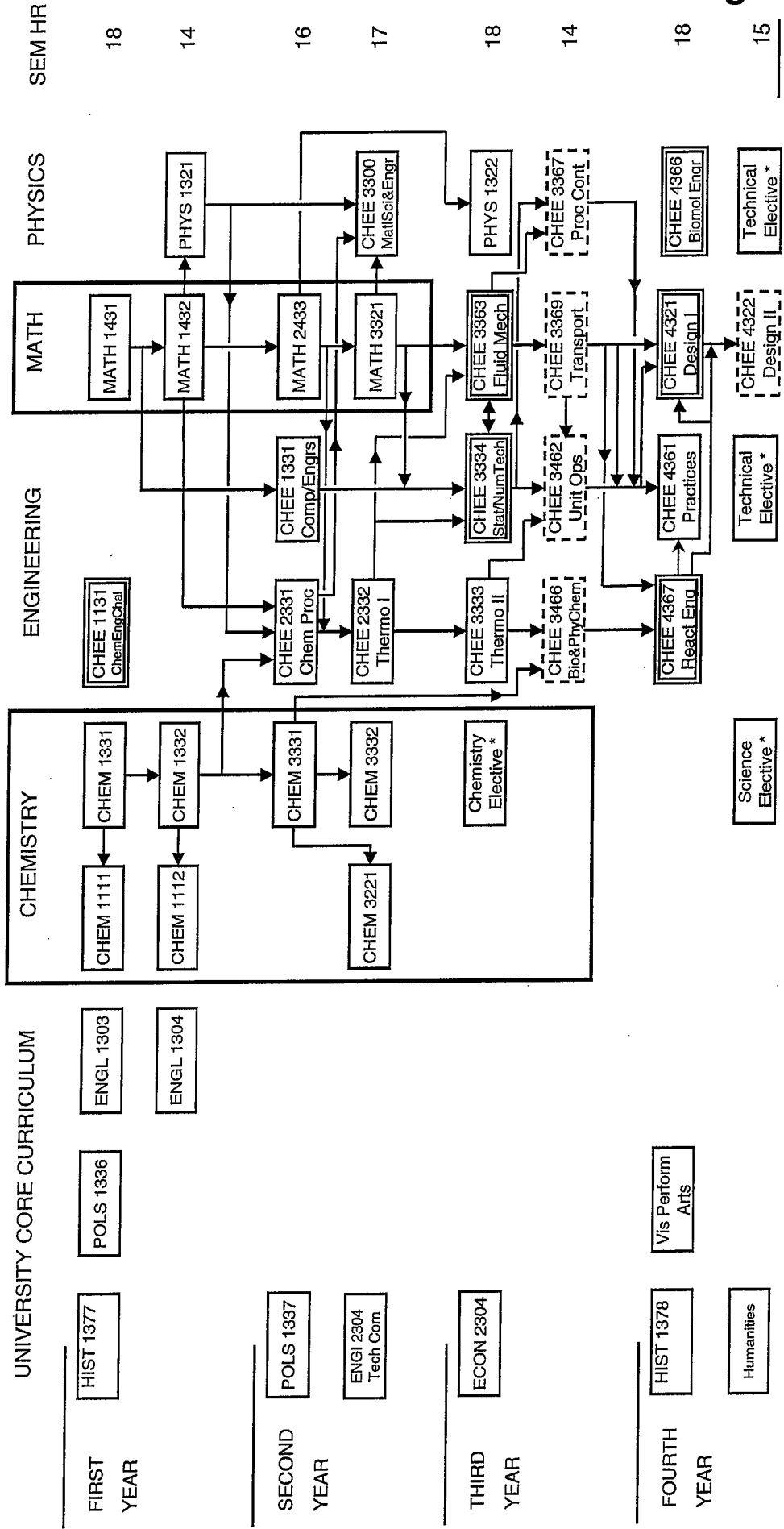
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*Spring Semester*

Course #	Course	Hrs.
	Adv. Sci. elective	3
CHEE 4322	ChE Design II	3
	Humanities Core	3
	Technical elective	3
	Technical elective	3

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CHEMICAL ENGINEERING CURRICULUM 2009

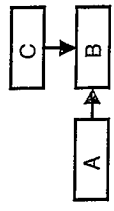


TOTAL 130

- TAUGHT FALL ONLY
- TAUGHT SPRING ONLY
- TAUGHT FALL & SPRING

\* From approved list

1. Arrow to top of box means C is a prerequisite for B
2. Arrow to side of box means credit or registration in A at the same time as B





**University of Houston**  
Texas Common Course Numbering System  
**Transfer Course Equivalencies**

2005-2007  
UH Catalog

**UC 10056 08F**  
**Page 6 of 6**

**Engineering**  
Bachelor of Science

**TCCNS CORE REQUIREMENTS**

**Communication (6 hours)**

ENGL 1301 English Composition I 1303  
ENGL 1302 English Composition II 1304

**Math/Reasoning (6 hours)**

MATH 2413 Calculus I 1431  
MATH 2414 Calculus II 1432

**Natural Sciences (6 hours)**

PHYS 2325 General Tech Physics I 1321  
PHYS 2326 General Tech Physics II 1322

**Visual/Performing Arts (3 hours)**

Choose ONE course from the core approved list

**Humanities (3 hours)**

Choose ONE course from the core approved list

**Social/Behavioral Sciences (6 hours)**

Choose TWO courses from the core approved list^

**U.S. History (6 hours)**

HIST 1301 U.S. History to 1877 1377  
HIST 1302 U.S. History after 1877 1378

**American Government (6 hours)**

GOVT 2301 American Government I 1336  
GOVT 2302 American Government II 1337

**UH**

**MAJOR REQUIREMENTS**

**UH**

MATH 2415 Calculus III 2433

**Biomedical Engineering Only**

BIOL 1406 General Biology I 1361/1161  
BIOL 1407 General Biology II 1362/1162  
CHEM 1411 General Chemistry I 1331/1111  
CHEM 1412 General Chemistry II 1332/1112

**Chemical and Biomolecular Engineering Only**

ECON 2302 Microeconomics 2304^  
CHEM 1411 General Chemistry I 1331/1111  
CHEM 1412 General Chemistry II 1332/1112  
CHEM 1411 General Chemistry I 1331/1111  
CHEM 1412 General Chemistry II 1332/1112

**Electrical & Computer Engineering Only**

ECON 2302 Microeconomics 2304^  
MATH 2320 Differential Equations 3331\*\*  
CHEM 1411 General Chemistry I and 1372  
CHEM 1412 General Chemistry II

**Industrial Engineering Only**

CHEM 1411 General Chemistry I and 1372  
CHEM 1412 General Chemistry II

**Mechanical Engineering Only\***

CHEM 1411 General Chemistry I and 1372  
CHEM 1412 General Chemistry II  
ENGR 2301 Engineering Mechanics I 2336  
ENGR 2302 Engineering Mechanics II 3336\*\*

\*\*Non-Advanced Credit Only

**A maximum of 66 hours (grades C- or better) of 1000/2000 level transfer hours may be applied toward a UH degree.**

- The College of Engineering has specific requirements for admission. Students with 15 or more hours must have a 2.50 GPA in the following areas: all college level work--all college level "Calculus-based" Math courses--all college level "Calculus-based" Physics & Chemistry courses--all English courses. Students graduating from high school outside of the US must have a TOEFL score of 550. All students must have attempted at least one college level "Calculus-based" Math & one college level "calculus-based" Physics or Chemistry course.
- Civil and Mechanical majors should also take a drafting course. Contact the Advisor in your major of choice to find out which course will be equivalent. This requirement is waived for students who have completed one year of mechanical drawing or general drafting in the 10<sup>th</sup>, 11<sup>th</sup>, or 12<sup>th</sup> grade.
- For information regarding the Biomedical Engineering Program, please contact Dr. Adam Capitano (Undergraduate Advisor) via email at: [acapitano@uh.edu](mailto:acapitano@uh.edu)
- ^ All Engineering students must take ENGI 2304 at the University of Houston, this course also counts for one of your Social/Behavioral Science core requirements. Chemical, Electrical & Computer Engineering majors must take ECON 2302, this course also counts for one of your Social/Behavioral core requirements.
- Full time students should contact an advisor in the College of Engineering after Calculus I is completed because of the need to begin specific course sequences in the major.
- See Engineering website [www.egr.uh.edu/](http://www.egr.uh.edu/) for information regarding STEP AHEAD: UH-HCC PRE-ENGINEERING PROGRAM

**\*TEXAS UNDERGRADUATE IN-STATE TUITION ENROLLMENT CAP\***

Students enrolling at a Texas public university or community college for the first time will be affected by the enrollment cap. There is now a limit on the number of hours those students may *attempt* while paying in-state. For details please see the following website:

[http://www.uh.edu/provost/stu/stu\\_enrollcapqs.html](http://www.uh.edu/provost/stu/stu_enrollcapqs.html)

**Transfer Center**

713-743-1010

[www.uh.edu/transfer](http://www.uh.edu/transfer)

**College of Engineering**

713-743-4200

[www.egr.uh.edu](http://www.egr.uh.edu)

Last Rev. 04/2007

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