To request a curriculum change, the following requirements must be met:
  o Common Body of Knowledge (CBK) courses completed (ENGL 104, MATH 151/152, PHYS 218/208, ENGR 111/112, CHEM 102/112) with a “C” or better in each course – students outside of engineering may take a CSCE programming course during his or her freshman year to replace part of the ENGR 111/112
  o A&M GPA and CBK GPA of 2.75 or better
  o Completed undergraduate curriculum change form, found at: http://registrar.tamu.edu/General/AllForms.aspx

Curriculum Change requests are processed one time per school year, after spring grades are posted, for admission the following fall. For example, to gain admission for Fall 2012, a curriculum change request must be completed and submitted to our offices during Spring 2012. Because our department is enrollment constrained, admission spaces are extremely limited.
  o You will be notified via e-mail if your request is accepted or denied.

See attached for more information about minors, certificates and a complete listing of the Chemical Engineering curriculum.

Questions? Visit us on the web at http://che.tamu.edu or send an email to advising@che.tamu.edu
# Upper Level Pre-Registration Worksheet

**CURRICULUM IN CHEMICAL ENGINEERING**

1. Place an "x" in the blank next to the classes you have credit for and classes which are in progress.
2. Complete the table below with the classes you would like to take for the indicated semester.
3. Email or print form and drop off to Katherine or Rachel if you would like us to review your selections.

## GRADUATING SENIOR?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

### TERM: Summer Fall

## Freshman Year

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 104</td>
<td>(3 cr)</td>
<td></td>
</tr>
<tr>
<td>MATH 151</td>
<td>(4 cr)</td>
<td></td>
</tr>
<tr>
<td>PHYS 218</td>
<td>(4 cr)</td>
<td>Math 151 Coreq.</td>
</tr>
<tr>
<td>ENGR 111</td>
<td>(2 cr)</td>
<td>Math 151 Coreq.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 102/112</td>
<td>(4 cr)</td>
<td>Chem 101/111</td>
</tr>
<tr>
<td>MATH 152</td>
<td>(4 cr)</td>
<td>Math 151</td>
</tr>
<tr>
<td>PHYS 208</td>
<td>(4 cr)</td>
<td>Phys 218, Math 152 Coreq.</td>
</tr>
<tr>
<td>ENGR 112</td>
<td>(2 cr)</td>
<td>Engr 111, Math 152 Coreq.</td>
</tr>
</tbody>
</table>

## Sophomore Year

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 227</td>
<td>(3 cr)</td>
<td>Chem 102</td>
</tr>
<tr>
<td>CHEM 237</td>
<td>(1 cr)</td>
<td>Chem 102; Chem 227 Coreq.</td>
</tr>
<tr>
<td>CHEM 204</td>
<td>(3 cr)</td>
<td>Upper Level</td>
</tr>
<tr>
<td>MATH 251</td>
<td>(3 cr)</td>
<td>Math 152</td>
</tr>
<tr>
<td>STAT 211 -OR-</td>
<td>(3 cr)</td>
<td>Math 152</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 228</td>
<td>(3 cr)</td>
<td>Chem 227</td>
</tr>
<tr>
<td>CHEM 238</td>
<td>(1 cr)</td>
<td>Chem 237; Chem 228 Coreq.</td>
</tr>
<tr>
<td>CHEM 205</td>
<td>(3 cr)</td>
<td>Chem 204, Math 251</td>
</tr>
<tr>
<td>CHEM 282</td>
<td>(3 cr)</td>
<td>Chem 204, Math 251</td>
</tr>
<tr>
<td>MATH 308</td>
<td>(3 cr)</td>
<td>Math 251</td>
</tr>
</tbody>
</table>

## Junior Year

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 316</td>
<td>(2 cr)</td>
<td>Chem 102</td>
</tr>
<tr>
<td>CHEM 318</td>
<td>(1 cr)</td>
<td>Chem 102; 316 Coreq.</td>
</tr>
<tr>
<td>CHEM 304</td>
<td>(3 cr)</td>
<td>Chem 205, Math 308</td>
</tr>
<tr>
<td>CHEM 313</td>
<td>(3 cr)</td>
<td>Chem 204; Chem 205 and Math 251 Coreq</td>
</tr>
<tr>
<td>CHEM 354</td>
<td>(3 cr)</td>
<td>Chem 205, Math 308; Chem 320 coreq</td>
</tr>
<tr>
<td>ENGR 482/PHIL 482</td>
<td>(3 cr)</td>
<td>Jr classification</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 322</td>
<td>(3 cr)</td>
<td>Chem 205 and Chem 354</td>
</tr>
<tr>
<td>CHEM 325*</td>
<td>(1 cr)</td>
<td></td>
</tr>
<tr>
<td>CHEM 320</td>
<td>(3 cr)</td>
<td>Chem 205, Math 308</td>
</tr>
<tr>
<td>CHEM 323</td>
<td>(3 cr)</td>
<td>Chem 304</td>
</tr>
<tr>
<td>CHEM 301^</td>
<td>(3 cr)</td>
<td>Eng 104, Jr status</td>
</tr>
<tr>
<td>Tech. Elective</td>
<td>(3 cr)</td>
<td>choose from either</td>
</tr>
<tr>
<td>Ecen 215 (Phys 208; Math 308) -OR- Meen 211 (Phys 218; Math 251)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Senior Year

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 326</td>
<td>(1 cr)</td>
<td>****</td>
</tr>
<tr>
<td>CHEM 414</td>
<td>(1 cr)</td>
<td>Chem 304, 323, Chen 301***</td>
</tr>
<tr>
<td>CHEM 424</td>
<td>(3 cr)</td>
<td>Chem 354; Chen 323 Coreq</td>
</tr>
<tr>
<td>CHEM 425</td>
<td>(3 cr)</td>
<td>Chem 320, 354; Chem 323 Coreq</td>
</tr>
<tr>
<td>CHEM 455</td>
<td>(3 cr)</td>
<td>Chem 320, Chen 323; Chen 354 coreq</td>
</tr>
<tr>
<td>CHEM 461</td>
<td>(3 cr)</td>
<td>Chen 320</td>
</tr>
<tr>
<td>CHEM 481</td>
<td>(1 cr)</td>
<td>Senior Class, Chen 301</td>
</tr>
</tbody>
</table>

## Core Curriculum

<table>
<thead>
<tr>
<th>Class</th>
<th>Hours</th>
<th>Class</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>KINE 198</td>
<td>(1 cr)</td>
<td>KINE 199</td>
<td>(1 cr)</td>
</tr>
<tr>
<td>Pols 206</td>
<td>(3 cr)</td>
<td>Pols 207</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>Hist elective $</td>
<td>(3 cr)</td>
<td>Hist elective $</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>V/PA $</td>
<td>(3 cr)</td>
<td>V/CD credits $</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>Social Science $</td>
<td>(3 cr)</td>
<td></td>
<td>(3 cr)</td>
</tr>
</tbody>
</table>

$ see your catalog for appropriate selections

* May be replaced, see advisor for options

^ CHEM 301 replaces ENGL 301

### Classes needed outside of degree plan:

**Certificate:**

**No** Yes

**Minor (s):**

**No** Yes

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### Name:

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### Email:

---

### UIN:

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TEXAS A&M UNIVERSITY
MINORS OFFERED BY COLLEGE

COLLEGE OF AGRICULTURE
Agricultural Communications and Journalism
Agricultural Economics and Agribusiness
Agronomy
Animal Science
Biochemistry
Bioenvironmental Sciences
Entomology
Environmental Soil Science
Forestry
Genetics
Horticulture
Park and Natural Resources
Poultry Science
Rangeland Ecology and Management
Tourism Resource Management
Wildlife and Fisheries Sciences

COLLEGE OF ARCHITECTURE
Art and Architectural History
Global Art, Design and Construction
Urban and Regional Planning

COLLEGE OF BUSINESS
Business

COLLEGE OF EDUCATION
Coaching
Creative Studies
Dance
Human Resource Development
Applied Learning – Science/Tech/Engr/Math
Sport Management

COLLEGE OF ENGINEERING
Aerospace Engineering
Computer Science
Electrical Engineering
Nuclear Engineering
Petroleum Engineering
Radiological Health Engineering

COLLEGE OF GEO SCIENCES
Earth Sciences
Geography
Geoinformatics
Geology
Geophysics
Meteorology
Oceanography

COLLEGE OF SCIENCE
Biology
Chemistry
Mathematics
Neuroscience
Physics
Statistics

COLLEGE OF LIBERAL ARTS
Africana Studies
Anthropology
Asian Studies
Classical Studies
Communication
Comparative Cultural Studies-International
Comparative Cultural Studies-United States
Economics
English
Film Studies
French
German
Hispanic Studies
History
Journalism Studies
Linguistics
Music
Philosophy
Psychology
Religious Studies
Russian
Sociology
Spanish
Theatre Arts
Women’s and Gender Studies

COLLEGE OF VET/MED
Biomedical Sciences
Technical specialty areas in Chemical Engineering

Some examples of course combinations that are acceptable as Chemical Engineering Specialty Options, and which can be used for Technical Specialty Emphasis, are given below (these are examples only - other combinations are possible; note that any course outside list requires Assistant Head's approval):

**Biotechnology**
CHEN/BAEN 471 - Intro to Biochemical Engineering
CHEN/BAEN 422 - Unit Operations in Food Processing

**Environmental Engineering**
MEEN 477 - Air Pollution Engineering
CVEN 402 - Engineered Environmental Systems
CVEN 413 - Natural Environmental Systems
CVEN 406 - Environmental Protection and Public Health

**Electronic Materials Engineering**
CHEN 475 - Microelectronics Process Engineering
ELEN 370 - Electronic Properties of Materials
ELEN 472 - Microelectronic Circuit Fabrication

**Polymer Engineering**
CHEN 451 - Intro. To Polymer Engineering
MEEN 455 - Engineering with Plastics
MEEN 458 - Fundamentals of Polymer Processing

**Process Safety Engineering Certification Program**
See: [http://essap.tamu.edu/safety.htm](http://essap.tamu.edu/safety.htm)

**Other CHEN Specialty Options**
CHEN 430 - Risk Analysis in Safety Engineering
CHEN 440 - Introduction to Transport Phenomena
CHEN 450 - Introduction to Microfabrication and Microfluids Technology
CHEN 459 - Oil and Gas Production and Processing
CHEN 460 - Quantitative Risk Analysis in Safety Engineering
CHEN 631 - Process Dynamics (enrollment in graduate course is by petition, GPA>3.20 required)
ENGR 470 - EPICS, Engineering Projects in Community Service(up to 3 hours)
CHEN 489 - Special Topics courses

**Note:** Any course outside list requires academic advisor's approval.
Safety Engineering Certificate

Goal: Prepares student for positions in several areas of safety engineering.

Requirements:
- 15 credit hours of courses, including:
  - SENG 312 or 321 (3 credits)
  - SENG 340 or SENG 430 or 460/660 (3 credits)
  - 6 credit hours of approved technical electives
- 3.0 GPR on required certificate courses

http://essap.tamu.edu/safety.htm

Future Certificates in Development

The college is currently working to develop the following additional engineering certificates:

- Engineering Entrepreneurship Certificate
- Engineering Leadership Certificate
- Engineering Public Policy Certificate
- Engineering Space Junior and Senior Certificates

Other Certificate Programs

Although not housed in the College of Engineering, the following certificate program is available only to engineering students.

Business Management Certificate for Engineering Students

Goal: Provide students with instruction in Accounting, Finance, Management and Marketing as it relates to Engineering.

Requirements:
- Junior, Senior or Graduate Level Classification
- Program Fee ($750.00 in 2009)
- Mandatory class attendance from 8:00 am - 5:00 pm for 3 weeks in the summer

http://essap.tamu.edu/bmc.htm

More of What Industry Has to Say...

"A student working toward obtaining a certificate (or a student that has obtained a certificate) in a specific course area sets that student apart from the rest. In addition, a certificate helps with marketing yourself in this highly competitive job market and shows you are in tune with that particular subject matter."

~ Xchelsia Bledsoe, GE Energy

For more information about engineering certificates, please contact:

Dwight Look College of Engineering
Engineering Student Services & Academic Programs
204 Zachry Engineering Center
3127 - Texas A&M University
College Station, TX 77843-3127

http://essap.tamu.edu/cert-programs.htm

Email: essap@tamu.edu

Phone: (979) 847-8887 Fax: (979) 847-8654
Why Should You Pursue a Certificate?

Certificate programs are designed to provide students an edge over other students who have similar interests, but do not pursue a certificate program that compliments that interest. Essentially, certificates are of great value to both students who pursue them and potential employers who seek candidates who acquire them. Students who obtain the certificates from the College of Engineering should anticipate the following benefits:

- Get more than just a degree
- Advance rapidly in the workplace
- Gain multidisciplinary instruction
- Experience education, training and culture in another country

Which Certificate Should You Select?

Students should consider their interests, the type of industry they would like to work for, the position they would like to have and the certificate required/approved courses. Students who have an interest in working for an energy company in another country may want to consider pursuing the Energy Engineering and/or International Engineering Certificates. In addition, those who desire a position in a manufacturing facility should consider the Engineering Project Management, Safety Engineering Specialty or Polymer Specialty Certificates. Finally, students must visit with their department advisor about the certificate courses that will count towards their degree program and multiple certificates. The credit hours required to obtain a certificate ranges from 12 to 18, but keep in mind that pursuing a certificate program will not necessarily extend students’ graduation dates. With careful planning students can graduate within their expected graduation date or a semester later.

What Does Industry Have to Say About Our Engineering Certificates?

The majority of the certificates were created based on feedback of the needs from industry members such as ConocoPhillips, Dow, GE and Schlumberger. They understand that the areas covered under each certificate have great importance by adding value to a student’s engineering education. Industry members comment that they look forward to recruiting engineers in the future that have earned a certificate.