### CH E

**Student Name** ________________ **TTU ID** ________________ **Date** ________

**Email Address** ________________ **ADVISING FOR** _________ (e.g., fall 2013)

**Students:** For courses taken at TTU, put the grade received next to the course. For transfer credit, use T and the grade received (ex. TB). For courses that you are currently enrolled in and expect to pass, use an R next to that course.

**Advisors:** Indicate the courses to be taken in the following semester by circling the courses.

#### FIRST YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1451, Calc. I</td>
<td>MATH 1452, Calc. II</td>
</tr>
<tr>
<td>CHEM 1307 &amp; 1107, Prin. of Chem. I</td>
<td>CHEM 1308 &amp; 1108, Prin. of Chem. II</td>
</tr>
<tr>
<td>PHYS 2401, Prin. of Phys. II</td>
<td>PHYS 1408 Prin. of Phys.</td>
</tr>
</tbody>
</table>

#### SECOND YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 3305 &amp; 3105, Org. Chem. I</td>
<td>CH E 3315, Fluid Mechanics</td>
</tr>
<tr>
<td>PHYS 2401, Prin. of Phys. II</td>
<td>ENGR 2392, Engr. Ethics (LPD)</td>
</tr>
</tbody>
</table>

#### THIRD YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring (file Intent to Graduate form)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH E 2306, Expos. Tech. Info (Oral Comm)</td>
<td>CHEM 3308 &amp; 3108, Phys. Chem. II</td>
</tr>
<tr>
<td>CH E 3326, Heat Transfer</td>
<td>CH E 3232, Transport Lab.</td>
</tr>
</tbody>
</table>

#### FOURTH YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH E 4353, Process Control</td>
<td>CH E 4356 Process Safety</td>
</tr>
<tr>
<td>CH E 4122 CHE Review</td>
<td>Chemical Engineering Elective</td>
</tr>
</tbody>
</table>

#### Additional Requirements - Indicate the Course (ex. ART 1309) as well as the grade.

- American History (6 hrs) ___________ ___________ Multicultural (3 hrs) ___________
- Political Science (6 hrs) ___________ Creative Arts (3 hrs) ___________
- Chemistry Electives (6 hrs lecture, 2 hrs lab) ___________ ___________ ___________
- International Experience - Completed ______ or Exempt ______
- Foreign language – 2 yrs HS ______ or freshman-level courses ______

#### Additional Comments:

**Advisor Signature** ________________ **Student Signature** ________________ **Date** ________

**Return Form to Kristina Thompson (CHE 211) For Hold Removal**
**Polymer and Materials Minor**

Minimum of six courses.

Two courses are required:

- CH E 4344 Polym./Mat. Lab.
- CH E 3330 Materials Sci.

Plus four courses chosen from the following list with two in another department:

- CHEM 3306 Organic Chem. II
- CHEM 4310 Polymer Chem.
- CH E 4340 Polymer Proc.
- CH E 4341 Polymerization Eng.
- CH E 4342 Polymer Physics/Eng.
- CH E 4346 Polymer Viscoelasticity
- E E 4381 VLSI Processing

**Math Minor**

Minimum of six courses.

Three courses are required:

- MATH 1451 Calc. I
- MATH 1452 Calc. II
- MATH 2450 Calc. III

One elective is required for the BS Ch E degree:

- MATH 3350 or 3354 Diff. Eqns. I

Plus six hours of approved courses (the following are recommended, others may be taken - see the Math Dept. for all options); for graduate school in Ch E, MATH 3351 or 4354 is recommended:

- MATH 2360 Linear Algebra
- MATH 3351 Higher Math for Eng. II
- MATH 4354 Diff. Eqns. II

**Bioengineering Minor**

(Catalog 2013-2014 and later)*

Minimum of seven courses required.

Three courses are required:

- BIOL 1403 Biology I (Fall)
- CHEM 1308/1108 Prin. Chem II (Fall or Spr)

Plus one of the following:

- BIOL 1404 Biology II (Spring)
- CHEM 3306/3106 Organic Chem. II & Lab**
- Mbio 3400 Microbiology

Plus one of the following core bioengineering courses:

- CH E 4363 Biochemical Engineering**
- ECE 5356 Bioinstrumentation/Biosensors

Plus two of the following (note must not include core course):

- CE 3309 Environmental Engineering
- CH E 4363 Biochemical Engineering(if not used as core)
- CH E 4364 Ch E Appl. in Biological Systems**
- CH E 4365 Biotransport**
- CH E 4366 Biomicrofluidics**
- CH E 4385 Bioprocess Control**
- CS 3368 Artificial Intelligence
- CS 4379 Concurrent and Parallel Programming
- CS 5393 Bioinformatics
- ECE 4367 Image Processing
- ECE 5351 Biomedical Signal Processing
- ECE 5355 Genomic Signal Processing and Control
- ECE 5356 Bioinstrumentation/Biosensors (if not used as core)
- ENV E 4385 Microbial Apps. in Envir. Engineering
- ENV E 4399 Bio. Municipal Wastewater Treatment
- IE 3361 Work Analysis and Design
- IE 4361 Engineering Design for People
- IE 4362 Industrial Ergonomics
- IE 4363 Work and Product Safety Engineering
- Mbio 3401 Principles of Microbiology (Fall or Spring):
  OR CHEM 3310 Molecular Biochemistry;
  OR Mbio 3341 Principles of Microbiology

*On catalog before 2013-2014, a statistics course is required: MATH 3342 or IE 3341 or CHE 4372

** Denotes courses preferred for CH E Majors