Chemistry Course Requirements – Chemical Engineering Emphasis

This emphasis is great for those interested in double majoring in chemistry and chemical engineering as well as those who are considering graduate school in chemical engineering.

1) Can take whichever calculus sequence is appropriate, including AP Calculus (MATH 1250 & 1260) or Engineering Calculus (MATH 1310 & 1320) Must finish the sequence that was started.
2) MATH 2270 + 2280 are more rigorous, but will take 2 semesters to complete.
3) Honors versions are PHYS 3210 + 3220. This sequence starts in Spring.
4) Honors versions of General Chemistry are CHEM 1211 + 1221. Sequence starts in the Fall. Must apply to be in the class.
5) Honors versions of Organic Chemistry are CHEM 2311 + 2321. Sequence starts in the Fall. Must apply to be in the class.
6) = Only 2 upper division labs required.
7) CHEM 4800 (research) or CHEM 4999 (Honors Thesis) can waive.
8) Visit chemical engineering website to get permission code for these classes if you are not double majoring in chemical engineering.

1ST YEAR FALL
MATH 1210 Calc I
4 cr. F, S, U
QR

1ST YEAR SPRING
MATH 1220 Calc II
4 cr. F, S, U
QR

2ND YEAR FALL
MATH 2210 Calc III
3 cr. F, S, U
QR

2ND YEAR SPRING
MATH 2250 ODE + LinAlg
4 cr. F, S, U
QR

PHYS 2210 Physics I
4 cr. F, S, U
SF

PHYS 2220 Physics II
4 cr. F, S, U
SF

PHYS 2215 Physics I Lab
1 cr. F, S

PHYS 2225 Physics II Lab
1 cr. F, S

CHEM 1210 Gen Chem I
4 cr. F, S, U
SF

CHEM 1220 Gen Chem II
4 cr. F, S, U
SF

CHEM 2310 Org Chem I
4 cr. F, S, U

CHEM 2320 Org Chem II
4 cr. F, S, U

CHEM 1215 Chem I Lab
1 cr. F, S

CHEM 1225 Chem II Lab
1 cr. F, S, U

CHEM 2315 Org I Lab
2 cr. F, S, U

CHEM 2325 Org II Lab
2 cr. F, S, U

CHEM 3060 Quantum
4 cr. F, S
QI

CHEM 3070 Thermo
4 cr. S
QI

CHEM 3100 Inorganic
3 cr. F, S

CHEM 3000 Quant Analys
4 cr. F, S, U
CW, QI

CHEM 3100 Adv Ana Lab
2 cr. 1st half S

CHEM 5700 Adv Inorg
2 cr. 1st half S

CHEM 3070 Adv Inorg
2 cr. 1st half S

CHEM 3200 Radiochemistry
3 cr. S

CH EN 3853 Ch Eng Thermo
3 cr. F

CH EN 3453 Heat Transfer
3 cr. F
QI

CH EN 3853 Ch Eng Thermo
3 cr. F

CH EN 3553 Chem Rxn Eng
3 cr. S

CH EN 3553 Chem Rxn Eng
3 cr. S

CH EN 3453 Heat Transfer
3 cr. F
QI

CH EN 3603 Mass Transfer
3 cr. S
This emphasis is great for those interested in double majoring in chemistry and chemical engineering as well as those who are considering graduate school in chemical engineering.

<table>
<thead>
<tr>
<th>Done?</th>
<th>Depart.</th>
<th>Number</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</table>

**ADVANCED LABS - Choose 2**

|       | CHEM    | 5700     | Analytical Chemistry Lab          | 2            | CW               | CHEM 3000                         | 1st      |
|       | CHEM    | 5710     | Organic Chemistry Lab             | 2            |                  | CHEM 2320                         | 1st      |
|       | CHEM    | 5720     | Physical Chemistry Lab            | 2            |                  | CHEM 3060, 3070                    | 2nd      |
|       | CHEM    | 5730     | Inorganic Chemistry Lab           | 2            |                  | CHEM 3100                         | 1st      |
|       | CHEM    | 3200     | Radiochemistry                    | 3            |                  |                                    | x        |

**CHEMICAL ENGINEERING ELECTIVES\(^\\dagger\)**

|       | CH EN   | 2800     | Process Engineering              | 3            |                  | MATH 2210                         | x        |
|       | CH EN   | 3853     | Chem Eng Thermodynamics          | 3            |                  | CH EN 2800                         | x        |
|       | CH EN   | 3353     | Fluid Mechanics                  | 3            |                  | CH EN 2800                         | x        |
|       | CH EN   | 3453     | Heat Transfer                    | 3            |                  | CH EN 2800                         | x        |
|       | CH EN   | 3553     | Chemical Rxn Engineering         | 3            |                  | CH EN 353, 353, 3453               | x        |
|       | CH EN   | 3603     | Mass Transfer                    | 3            |                  | CH EN 3853, 353, 3453              | x        |

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