### Requirement Sheet Key

- ✶ = Upper-Division Admission Requirements

### Mathematics (24 Credits)

- ✶ Math 124 (5cr) – Calculus I
- ✶ Math 125 (5cr) – Calculus II
- ✶ Math 126 (5cr) – Calculus III
- ✶ Math 307 (3cr) – Differential Equations [pr: Math 125]
- Math 308 (3cr) – Matrix Algebra [pr: Math 126]

One course from the following list:
- Math 309, Math/Stat 390 or Ind E 315
  (AMATH 351/352/353 may substitute for Math 307/308/309)

### Sciences (41 Credits)

- ✶ Chem 142 (5cr) – General Chemistry with lab
- ✶ Chem 152 (5cr) – General Chemistry with lab
- ✶ Chem 162 (5cr) – General Chemistry with lab (145 series can substitute for 142 series)
- Chem 237 (4cr) – Org. Chem I or Chem 223 [pr: Chem 162]
- Chem 238 (4cr) – Org. Chem II or Chem 224 [pr: Chem 237 or Chem 223]
- Chem 455 (3cr) – Physical Chem I [pr: Chem 162, Math 126, Phys 123]
- ✶ Phys 121 (5cr) – Mechanics with lab [pr: Math 124]
- ✶ Phys 122 (5cr) – Electro/Oscillatory with lab [pr: Math 125]
- Phys 123 (5cr) – Waves with lab [pr: Math 126]

### Written & Oral Communications (8 Credits)

- ✶ ENGL 131 (5cr) – English Composition (or approved University course)
- HCDE 231 (3cr) – Intro to Technical Writing [pr: Engl. Comp]

*Additional writing credits are built into major core courses.

### Visual, Literary & Performing Arts/Individuals & Society (VLPA/I&S) (24 Credits)

Minimum 10 credits in VLPA required.
Minimum 10 credits in I&S required.
Remaining 4 credits can be either VLPA or I&S.
Minimum 3 credits in Diversity (DIV) required (can overlap with VLPA/I&S requirements).

### Engineering Fundamentals (20 Credits)

- AMATH 301 (4cr) – Beg. Scientific Computing (preferred)
  -or-
  CSE 142 (4cr) – Computer Programming I

### ChemE Core Courses (54 Credits)

- Chem E 310 (4cr) – Material and Energy Balances
- Chem E 325 (4cr) – Energy & Entropy
- Chem E 326 (4cr) – Chem. Engineering Thermodynamics
- Chem E 330 (5cr) – Transport Processes I
- Chem E 340 (4cr) – Transport Processes II
- Chem E 435 (4cr) – Transport Processes III
- Chem E 436 (3cr) – Chem. Engineering Lab I
- Chem E 437 (3cr) – Chem. Engineering Lab II
- Chem E 455 (3cr) – Surface and Colloid Science Lab
- Chem E 457 (3cr) – Principles of Molecular Engineering
- Chem E 465 (4cr) – Reactor Design
- Chem E 480 (4cr) – Process Dynamics and Control
- Chem E 485 (4cr) – Process Design I
- Chem E 486 (5cr) – Process Design II

### Electives (16 credits)

See department for list of approved courses.

### Free Electives (9 Credits)

### Total Credits Required for Graduation (180 Credits)

### Early Admission Requirements

1. Early Admission is an option for Autumn Quarter Only.
2. Students must be enrolled at UW-Seattle.
3. Math 124, 125 & 126 or equivalent.
4. PHYS 121; Chem 142, 152 and 162.
5. 5 credits of English Composition.
6. 15 Of the above 30 credits must have been completed at UW.

### Application Deadlines

Early Admission – July 1st
Upper Division Admission – February 1st
# Chemical Engineering Sample Curriculum

**University of Washington**

www.cheme.washington.edu

## Freshman – Autumn Quarter
- Math 124 – Calculus I: 5
- Chem 142 – Chem & Lab I: 5
- English Composition: 5

Quarter Total: 15

## Freshman – Winter Quarter
- Math 125 – Calculus II: 5
- Chem 152 – Chem & Lab II: 5
- **VLPA/I&S**: 5

Quarter Total: 15

## Freshman – Spring Quarter
- Math 126 – Calculus III: 5
- Chem 162 – Chem & Lab III: 5
- Phys 121 – Mechanics & Lab I: 5

Quarter Total: 15

### Bold face courses are required for upper-division admission.

*Math 307, 308 & 309 may be substituted with AMATH 351, 352 & 353

See Chemical Engineering Advising Guide for list of engineering electives

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Last revised September 2014