## 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)
- ENGR 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)*
- 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

**Last revised December 2016**
### 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

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### Sophomore – Autumn Quarter
- Chem 237/223 – Organic Chem 4
- Phys 122 – Electro & Lab I 5
- *Math 307 – Diff. Equations* 3
- ENGR 231- Intro to Tech. Writing 3

**Quarter Total**: 15

### Sophomore – Winter Quarter
- Chem 238/224 – Organic Chem 4
- Phys 123 – Waves & Lab I 5
- *Math 308 – Matrix Algebra* 3
- AMATH 301– Sci.Computing 4

**Quarter Total**: 16

### Sophomore – Spring Quarter
- ChemE 310 – Matl/Engry Balance 4
- *Math 309 – Linear Analysis* 3
- Engineering/Free Elective 3
- VLPA/I&S 5

**Quarter Total**: 15

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### Junior – Autumn Quarter
- ChemE 325 – Energy & Entropy 4
- Chem 455 – Phys Chem I 3
- ChemE 330 – Transport Process I 5
- VLPA/I&S 5

**Quarter Total**: 15

### Junior – Winter Quarter
- ChemE 326 – Thermodynamics 4
- ChemE 340 – Transport Process II 3
- Engineering Elective 4
- VLPA/I&S 3

**Quarter Total**: 16

### Junior – Spring Quarter
- Engineering Elective 4
- ChemE 436 - Chem E Lab 1 3
- ChemE 457 – Principles of MolE 3
- VLPA/I&S 4

**Quarter Total**: 14

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### Senior – Autumn Quarter
- ChemE 435 – Transport Process III 4
- ChemE 455 – Colloid Lab 3
- ChemE 465 – Reactor Design 4
- FREE Elective 4

**Quarter Total**: 15

### Senior – Winter Quarter
- ChemE 437 – Chem Engr lab II 3
- ChemE 480 – Process Dynamics 4
- ChemE 485 – Process Design I 4
- Engineering Elective 3

**Quarter Total**: 14

### Senior – Spring Quarter
- ChemE 486 – Process Design II 5
- Engineering Elective 5
- VLPA/I&S 2

**Quarter Total**: 12

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**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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