ACS Certification Check-list

Required Introductory Chemistry Courses
- □ CH105 & CH106 – General Chemistry, or
- CH107 – Advanced General Chemistry

Required Allied Courses
- □ MA106 – Calculus 1
- □ MA107 – Calculus 2
- □ PH107-8 – Elementary Physics, or
- PH201-2 – Analytical Physics

Required Foundation Chemistry Courses
- □ CH351 – Organic Chemistry 1 (42/400 lab hours)
- □ CH321 – Analytical Chemistry 1 (56/400 lab hours)
- □ CH332 – Inorganic Chemistry
- □ CH471/2 – Physical Chemistry Lecture: CH471 Quantum Mechanics or CH472 Thermodynamics and Kinetics
- □ CH361 – Biochemistry 1: Bio-organic

Required In-depth Chemistry Courses
- □ CH352 – Organic Chemistry 2 (42/400 lab hours)

Pick and Choose In-depth Chemistry Courses (3 additional courses required)
- □ CH422 – Analytical Chemistry 2
- □ CH431 – Advanced Inorganic Chemistry
- □ CH4x9 – Special Topics in Chemistry
- □ CH462 – Biochemistry II: Central Metabolism
- □ CH465 – Environmental Chemistry
- □ CH471/2 – Physical Chemistry Lecture: CH471 Quantum Mechanics or CH472 Thermodynamics and Kinetics

Pick and Choose Chemistry Laboratory Courses (choose 4 of 5 areas to obtain 400 lab hours)
  Analytical Chemistry (CH321 counts for area)
  - □ CH424 – Instrumental Analysis Laboratory (2 hours, may repeat for credit) (56/400 lab hours)
  Inorganic Chemistry
  - □ CH432 – Inorganic Chemistry Laboratory (2 hours) (56/400 lab hours)
  Organic Chemistry (CH351/2 count for area)
  - □ CH454 – Organic Chemistry Laboratory (2 hours) (56/400 lab hours)
  Biochemistry
  - □ CH463 – Biochemistry Laboratory (2 hours) (56/400 lab hours)
  - □ CH468 – Practical Molecular Biology (4 hours) (84/400 lab hours)
  Physical Chemistry
  - □ CH473 – Physical Chemistry Laboratory: Physical Properties (2 hours) (56/400 lab hours)
  - □ CH474 – Physical Chemistry Laboratory: Spectroscopy (2 hours) (56/400 lab hours)
  Interdisciplinary
  - □ CH404 – Interdisciplinary Laboratory (2 hours) (56/400 lab hours)

Recommended Chemistry Courses
- CH491 – Chemistry Literature
- CH392 – Chemistry Seminar: Observation
- CH492 – Chemistry Seminar: Presentation
- CH493, CH494 – Undergraduate research
- CH411, CH412 – Independent Study

Recommended Allied Courses
- MA208 – Calculus and Analytic Geometry 3
- MA334 – Differential Equations
Honors Chemistry Major Check-list

Required Introductory Chemistry Courses
- CH105 & CH106 – General Chemistry, or
  CH107 – Advanced General Chemistry

Required Allied Courses
- MA106 – Calculus 1
- MA107 – Calculus 2
- PH107-8 – Elementary Physics, or
  PH201-2 – Analytical Physics

Required Chemistry Courses
- CH351 – Organic Chemistry 1
- CH352 – Organic Chemistry 2
- CH321 – Analytical Chemistry 1
- CH332 – Inorganic Chemistry
- CH361 – Biochemistry 1: Bio-organic
- CH471/2 – Physical Chemistry Lecture: CH471 Quantum Mechanics or CH472 Thermodynamics and Kinetics

Other requirements
- CH392 – Chemistry Seminar 1
- At least 32 hours of chemistry not including CH392 Chemistry Seminar 1

Chemistry Major Check List

Required Introductory Chemistry Courses
- CH105 & CH106 – General Chemistry, or
  CH107 – Advanced General Chemistry

Required Allied Courses
- MA106 – Calculus 1
- PH107-8 – Elementary Physics, or
  PH201-2 – Analytical Physics

Required Chemistry Courses
- CH351 – Organic Chemistry 1
- CH352 – Organic Chemistry 2

Enough Hours of Chemistry for a Total of 32 Hours (Must Include Two of the Four Areas)
- CH332, CH431, CH432 – Inorganic Chemistry Courses
- CH321, CH422, CH424 – Analytical Chemistry Courses
- CH361, CH462, CH463 – Biological Chemistry Courses
- CH471, CH472, CH473, CH474 – Physical Chemistry Courses

Chemistry Minor Check List

Required Introductory Chemistry Courses
- CH105 & CH106 – General Chemistry, or
  CH107 – Advanced General Chemistry

Required Chemistry Courses
- CH351 – Organic Chemistry 1
- CH352 – Organic Chemistry 2

One Additional Course
- CH321, CH332, CH361, CH471, or CH472

Description of Majors

All primary chemistry majors should pursue the degree certified by the American Chemical Society. It is the most prestigious and most strongly regarded option. It will provide the most flexibility and options after graduation. If you are interested in chemistry as a path to a professional program and will earn another major or a minor, the Honors major may be an option. It provides a good broad background but does not provide as much in depth work in chemistry. If you are pursuing chemistry as a secondary major, you may want to consider the Chemistry Major.