Chemical Engineering (BS): Honors Concentration

To see more about what you will learn in this program, visit the Learning Outcomes website (https://apps.oirp.ncsu.edu/pgas/).

The Honors Program allows students to gain a deeper understanding of chemical engineering principles than would be acquired by completing the standard CHE curriculum. Admission to the program requires students to have earned a minimum overall GPA of 3.5 and a minimum GPA of 3.5 in CHE 205 Chemical Process Principles and CHE 225 Introduction to Chemical Engineering Analysis. An honors thesis based on a supervised research experience and completion of at least one semester of faculty-supervised research are required for completion of the Honors Program.

Plan Requirements

Chemical Engineering (BS): Honors Concentration: 127 Total Units

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E 102 Engineering in the 21st Century 2

Hours 17

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CHE 312  Transport Processes II  3
CHE 316  Thermodynamics of Chemical and Phase Equilibria  3
CHE 330  Chemical Engineering Lab I  4
ENG 333  Communication for Science and Research  3

Total Hours  17

Fourth Year
Fall Semester
CHE 446  Design and Analysis of Chemical Reactors  3
CHE 450  Chemical Engineering Design I  3
CHE 497  Chemical Engineering Projects I  3

Select one of the following:
CHE 711  Chemical Engineering Process Modeling  3
CHE 713  Thermodynamics I  3
CHE 715  Transport Phenomena  3
CHE 717  Chemical Reaction Engineering  3

Spring Semester
CHE 435  Process Systems Analysis and Control  3
CHE 451  Chemical Engineering Design II  3
Honors Elective  3
CHE 495  Honors Thesis Preparation  1

Total Hours  12

1  A grade of C or higher is required.
2  A grade of C- or higher is required.

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Total Hours  17
### Semester Sequence

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### Career Opportunities

Careers in chemical engineering are sometimes exciting, always demanding, and ultimately provide a sense of accomplishment and achievement. Graduates find employment in sub-disciplines such as production, technical service, sales, management and administration; research and development; and consulting and teaching. Students desiring careers in teaching, research, or consulting are encouraged to continue their education and pursue a graduate degree (consult the Graduate Catalog). The undergraduate curriculum also provides strong preparation for graduate study in a wide range of professional specialties, and chemical engineering graduates often pursue careers in the medical sciences, business management, and law.