Chemical engineering is a discipline that traditionally has been
based in the application of chemistry as an enabling science. The
strength of that foundation has resulted in enormous advances in
the chemical, petroleum, and related industries that have relied on
chemical engineering to provide much of the intellectual capital on which
they depend. Over time, and with increasing speed, the discipline has
expanded so that biological sciences and chemistry now fill the position
once uniquely held by chemistry. Georgia Tech’s School of Chemical
& Biomolecular Engineering is a national leader in restructuring its
curriculum and research initiatives to reflect that evolution.

The chemical and biomolecular engineering undergraduate curriculum
leads to a Bachelor of Science in Chemical and Biomolecular Engineering.
Chemical and biomolecular engineering principles are taught as the
foundation of that degree but students also are expected to develop an
ability to solve all kinds of problems, to view systems in their entirety,
and to formulate and test solutions irrespective of the framework of
the problem. Completion of the B.S. degree prepares students for entry
into the workforce, for advanced study in chemical and biomolecular
engineering, or for countless other graduate programs.

Program Educational Objectives
The mission of the School of Chemical & Biomolecular Engineering is to
provide students with the intellectual basis to be educated citizens, to
prepare them for successful professional careers, and to advance the
science and technology that form the basis of chemical and biomolecular
engineering. In pursuit of this mission, the School has adopted the
following program educational objectives.

- Graduates will be recognized for excellence and leadership and
  selected for high-impact industrial, academic, government, and other
  professional positions
- Graduates will be intellectual leaders in solving global problems in
  a diverse and evolving landscape of technology, environment, and
  public policy
- Graduates will demonstrate critical-thinking and problem-solving
  abilities in developing creative, innovative, and ethical solutions
to contemporary challenges using the tools of chemical and
biomolecular engineering
- Graduates will engage in self-initiated, life-long learning for
  professional growth in their chosen career paths.

Student Outcomes
In pursuit of its educational objectives, the School has adopted the
following student outcomes. Upon graduation students are expected to
be able to demonstrate:

1. an ability to identify, formulate, and solve complex engineering
   problems by applying principles of engineering, science, and
   mathematics;
2. an ability to apply engineering design to produce solutions that
   meet specified needs with consideration of public health, safety,
   and welfare, as well as global, cultural, social, environmental, and
   economic factors;
3. an ability to communicate effectively with a range of audiences;
4. an ability to recognize ethical and professional responsibilities in
   engineering situations and make informed judgments, which must
   consider the impact of engineering solutions in global, economic,
   environmental, and societal contexts;
5. an ability to function effectively on a team whose members together
   provide leadership, create a collaborative and inclusive environment,
   establish goals, plan tasks, and meet objectives;
6. an ability to develop and conduct appropriate experimentation,
   analyze and interpret data, and use engineering judgment to draw
   conclusions.
7. an ability to acquire and apply new knowledge as needed, using
   appropriate learning strategies.

In pursuit of these outcomes, the curriculum is designed to provide
coverage of core areas of chemical and biomolecular engineering, and to
allow students opportunities to explore the breadth of the discipline. The
curriculum requires a total of 129 credit hours for the B.S. degree. The
biotechnology option allows the student to focus intensely in this rapidly
emerging area of chemical engineering. The standard option provides
the flexibility to explore other areas of chemical engineering practice
while providing an understanding of the biomolecular aspects of modern
chemical engineering. The standard program will also allow chemical
and biomolecular engineering students to tailor their educations to their
particular interests and plans for their professional careers. Students
are encouraged to use the required elective hours to earn a minor or
certificate, or at least to focus their electives in an area of particular
interest.

Many graduates have found international experience obtained as
a student to be valuable later in their careers; the School actively
encourages such experiences and continues to develop new study
abroad opportunities.

Finally, although the focus of the curriculum is development of technical
skills, it has elements geared to enhance communication, teamwork, and
business skills.

Minors and Certificates
Special opportunities exist for students wishing to pursue minors or
certificates in fields of particular interest. The School of Chemical and
Biomolecular Engineering participates in the interdisciplinary Energy
Systems minor and offers a Pulp & Paper certificate.

General information regarding minors at Georgia Tech can be found
here: Minor Program of Study & Guidelines.

Bachelor's Degrees
- Bachelor of Science in Chemical and Biomolecular Engineering

Transfer Students
Due to the sequence of courses and the order in which they must
be taken, students who transfer into the school of Chemical and
Biomolecular Engineering (ChBE) from another university should expect
to be enrolled for a minimum of six semesters (Fall, Spring, Summer). If,
for financial aid purposes, insurance, etc., students are required to be full-
time, they should transfer to Georgia Tech having sufficient non-chemical
and biomolecular engineering courses remaining to enroll full-time for six terms. All prerequisites and co-requisites must be followed.

The B.S. in Chemical and Biomolecular Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.