

Catalog of Postgraduate Programs and Curricula

Curriculum for PhD(CBME) (For students admitted in 2010-11)

Program Requirements for Doctor of Philosophy (PhD) Program in Chemical and Biomolecular Engineering

Credits

1. To complete a **minimum of 18 credits** of postgraduate coursework, with at least 9 credits in Chemical and Biomolecular Engineering.
2. Students entering with a master's degree from the Department will be granted credit transfer of up to 12 credits by the Department Head and PG Coordinator.
3. Students entering with a master's or equivalent degree in Engineering or a related discipline from outside the Departments may be granted credit transfer of up to 9 credits, by the Department Head and PG Coordinator.
4. Students entering without a Chemical and Biomolecular Engineering degree are encouraged to take some CENG undergraduate core courses, subject to the approval of their thesis supervisor.

Postgraduate Seminar

1. **Full-time students** must take CENG 6800 *Chemical Engineering Seminar* every term, and present at least 2 seminars during their study. Students must pass CENG 6800 5 times, which should include the terms when they present their seminars.
2. **Part-time students** must take and pass CENG 6800 at least twice in the terms when they present their seminars.

Language Requirements

Full-time students must pass LANG 5001 *Postgraduate English for Academic Purposes*.

(a) *The 1 credit earned from LANG 5001 cannot be counted toward the credit requirements.*

(b) *Exemption from taking LANG 5001 may be granted by the Department Head and PG Coordinator.*

Qualifying Examination

To pass a qualifying examination within the first 1½ years of the PhD studies.

Research and PhD Thesis Examination

1. To conduct research and enroll in CENG 7990 *Doctoral Thesis Research*; and
2. To defend the PhD thesis successfully.

Concentration

Nanotechnology Concentration

In addition to the program requirements specified above, students who opt for the Nanotechnology concentration are required to:

- Take 1 NANO course;
- Complete NANO 6010 *Advanced Topics in Nano Science and Technology* for 1 term (*NANO 6010 can be used to replace 1 term of CENG 6800*); and
- Conduct research in nano area.

Energy Technology Concentration

In addition to the program requirements specified above, students who opt for the Energy Technology concentration are required to:

- Take 1 ENEG course;
- Complete ENEG 6010 *Advanced Topics in Energy Technology* for 1 term. (*ENEG 6010 can be used to replace 1 term of registration of CENG 6800*); and
- Conduct research in energy area.