

# Combination BS/MS Degree Program

The Combination BS/MS degree program allows qualified students to simultaneously earn both a Bachelor of Science in Chemical Engineering and a Master of Science in Chemical Engineering degree. Qualified students can begin their master's degree course work while undergraduate seniors and double count up to twelve credit hours of specific graduate chemical engineering courses for both the bachelor's and master's degree requirements. The intention of the program is to provide a way for students to complete requirements for both degrees in significantly less time than would normally be required if both degrees were pursued separately.

The Combination BS/MS degree program also affords greater flexibility in scheduling course work than is available through the traditional BS degree followed by the MS degree program. By working towards both the bachelor's and master's degrees simultaneously, students have the opportunity to:

1. Take graduate courses during the fourth year and defer some senior courses to the fifth year.
2. Engage in two-years of research extending through the fourth and fifth years.

**However, be aware that for the majority of Chemical Engineering students an MS degree in Chemical Engineering offers little or no advantage over the BS degree in Chemical Engineering.** The reasons for this are:

1. If your objective is an industry job, in the majority of companies chemical engineers with a Masters degree are hired to do the same jobs as chemical engineers with a Bachelors degree. So a Masters degree does not significantly expand job opportunities. It is true that Masters students' starting salary is usually a bit higher than Bachelors students', but sometimes Bachelors students with significant co-op or internship experience get the highest starting salaries. And a graduate with a Bachelors degree who does well in the first year on the job will probably have a higher salary in his/her second year than a newly hired Masters degree student (and a year of getting paid real wages instead of paying for studies).

2. If your objective is a Ph.D. degree in Chemical Engineering, the 4/1 is definitely not for you. Be aware that all quality Chemical Engineering Ph.D. programs directly accept students with the Bachelors degree and fully support them, i.e., students not only do not have to pay for their classes but they are also getting paid a living wage. In other words, instead of paying for the extra year of graduate courses in the 4/1 program, you will get paid when taking these courses as a Ph.D. student. Furthermore, the culture in chemical engineering is not to pursue Ph.D. studies in the same department from which you earned your Bachelors degree. And Ph.D. Chemical Engineering programs require that their students take many of their own courses. So for a student continuing for Ph.D. at another university, many of the UF graduate courses taken in a 4/1 program will not be transferrable.

That said, there are cases where a 4/1 program in Chemical Engineering does have advantages. Chemical Engineering is a great degree for pre-law students interested in patent law, and a Masters degree would help not only for admission to law school, but also for future career advancement. Similar advantages can be obtained for pre-med students.

Another situation where a 4/1 degree is a good idea is a 4/1 degree that combines a Bachelors in Chemical Engineering with a Masters in another discipline (e.g., Biomedical Engineering, Environmental Engineering, or Materials Science).

## Requirements for Admission

The general requirements for admission to the Combination BS/MS degree program include:

1. Senior status (4EG)
2. Completion of 6 ECH-prefixed BSChE core courses at the University of Florida
3. Upper division grade point average of at least 3.3
4. A minimum GPA of 3.2 in chemical engineering courses
5. A minimum score of (Verbal + Quantitative = 1,100) on the GRE
6. Satisfaction of Graduate School and Chemical Engineering Department graduate studies admission requirements
7. Three letters of recommendation from professors within the Chemical Engineering Department

This program is directed toward students seeking a non-thesis MS degree. Students applying for admission to this program should consult with their faculty mentor for guidance and additional information as needed.

## Application for Admission

Admission to the program requires two applications. The first application is to the Chemical Engineering Department Graduate Committee requesting permission to participate in the Combination BS/MS degree program. The second application is to the Graduate School. The application to the Chemical Engineering Department may be made at the same time or earlier than the application to the Graduate School.

### Application Procedure

Typically, students apply to the Chemical Engineering Department during the second semester of the junior year or the first semester of the senior year. Application to the Graduate School occurs one or two semesters later.

### Note:

1. Students must specify that he/she is applying to the Combination BS/MS degree program on the graduate application form.
2. The GRE must be taken prior to graduate studies admission.

## Combination BS/MS Degree Requirements

The requirements of the combination degrees do not differ from those for the two degrees pursued separately.

1. All Chemical Engineering BS requirements must be met.
2. All Chemical Engineering MS requirements must be met.
3. Up to twelve credit hours of prior-approved course work may be double-counted toward each of the two degrees.
4. The BS and MS degrees may be awarded simultaneously upon completion of all requirements. A student who leaves the program before completing all requirements, but who has completed all BSChE degree requirements, will be awarded the BSChE degree.

## **Double-Counted Graduate Level Courses**

The following courses may be double counted for credit as undergraduate chemical engineering technical electives and for the master's degree:

- ECH 6270 Continuum Basis of Chemical Engineering
- ECH 6272 Molecular Basis of Chemical Engineering
- ECH 6285 Transport Phenomena
- ECH 6847 Mathematical Basis of Chemical Engineering

## **Academic Performance Requirements**

All credit to be counted towards the master's degree must carry a cumulative GPA of 3.0 or better. Students unable to maintain a minimum graduate GPA of 3.0 will be dropped from the BS/MS program with the accumulated graduate course hours applied to the BSChE degree.

## **Financial Aid**

Students should be aware that most undergraduate financial aid covers only undergraduate courses and programs. See [Combination Degree Programs](#).

## **Expected Completion Time**

The Combination BS/MS degree program provides the opportunity for qualified undergraduate students to obtain a master's degree in Chemical Engineering with one additional academic year. And, depending on the number of advanced placement courses, students may be able to complete both degrees one or two semesters earlier than completing the two degrees separately.

## **Additional Information**

Students interested in this program should contact [Dr. Spyros Svoronos](#).