

Combined B.S./M.S. Program
Department of Civil and Environmental Engineering

The Department of Civil and Environmental Engineering offers a combined B.S./M.S. program that will allow outstanding students to earn both a BSCE and MSCE degree in five years of study. This accelerated program will allow these students to begin their graduate experience at an earlier date and thereby be presented with the challenges and rewards of advanced learning and research activities, which would not be available under the current structure.

This combined program does not compromise the requirements for either the B.S. or the M.S. degree in Civil Engineering and it is only available to current University of Maryland undergraduate students. Students must complete all of the normal requirements for both the Bachelor's degree and the Master's degree. Students completing this program will have a minimum of 146 semester hours of credit.

The minimum requirements for acceptance into this combined program are:

- At least a 3.50 GPA at the time of admission
- No more than 24 credits of ENCE courses remaining for the B.S. degree
- No more than 6 credits of CORE requirements remaining for the B.S. degree
- At least 3 letters of recommendation
- An essay or statement of purpose

For additional information on this program students should contact Dr. McCuen.



The Graduate School
 2123 Lee Building
 College Park, Maryland 20742-5121
 301.405.4198 TEL 301.314.9305 FAX

Combined Bachelor's/Master's Degrees

Name _____ I.D. Number _____

Address _____ Local Phone _____

Grad. Program _____

The following courses are to be included in the cumulative G.P.A. for the graduate program listed above. Up to 9 credits taken under the combined bachelor's/master's program may be included.

Semester	Prefix	Course No.	Suffix	Credit (optional)	Grade (Optional)

 Department Undergraduate Chair DATE

 Department or Graduate Program Chair DATE

 Graduate School Director DATE

Possible Graduate-Level Tech Electives for BS/MS

The following are potential selections for the two classes that simultaneously satisfy BS Tech Elective and MS coursework requirements in the BS/MS program. Note that this is a partial, tentative list, and the choice of appropriate coursework for a particular student would be subject to your MS advisor's approval.

Environmental

ENCE 630 Environmental and Water Resource Systems I

ENCE 637 Biological Principles of Environmental Engineering

ENCE 650 Process Dynamics in Environmental Systems*

ENCE 651 Chemistry of Natural Waters*

ENCE 655 Environmental Behavior of Organic Pollutants*

ENCE 756 Bioremediation*

** completion of ENCE 411 & 412 as prerequisites or corequisites*

Water Resources

ENCE 630 Environmental and Water Resource Systems 1

ENCE 688D Surface Water Quality Modeling

ENCE 688R River Engineering

ENCE 688U Hazardous Waste Management

Structural

ENCE 610 Fundamentals of Structural Analysis

ENCE 611 Finite Element Methods

ENCE 613 Structural Dynamics

ENCE 620 Engineering Risk Analysis

Geotechnical

ENCE 640 Advanced Soil Mechanics

ENCE 641 Advanced Foundation Systems

ENCE 643 Theory of Soil Strength

ENCE 647 Slope Stability & Seepage

ENCE 741 Earth Retaining Structures

ENCE 743 Embankment Dam Design

Transportation

ENCE673 Urban Transportation

ENCE674 Urban Transit Planning and Rail Transportation Engineering

ENCE672 Regional Transportation Planning (Prereq: ENCE 471)

Project Management

ENCE661 Project Cost Accounting and Finance

ENCE662 Introduction to Project Management (*if student has not taken 320*)

ENCE664 Legal Aspects of Engineering Design and Construction

FREQUENTLY ASKED QUESTIONS

BS/MS PROGRAM: CIVIL AND ENVIRONMENTAL ENGINEERING

What is the BS/MS Program?

The BS/MS program is an opportunity to complete the requirements for both the BS and MS degree in a five-year program. Completing a MS degree traditionally requires 1.5 to 2 years full time after the BS degree is received and much longer part time. Therefore, this program allows our best students to become involved in graduate work and research early in their University career.

What are the advantages of participating in the program?

Obviously, the reduced time to complete both degrees is a benefit. However, those participating in the program also have the opportunity to get involved in research as an undergraduate and to take graduate classes while still in their undergraduate program.

What are the disadvantages?

The program does not have real disadvantages. You get to enroll in two graduate courses in your fourth year, which count towards both your BS and MS degrees; and these courses will be focused on a topic that interests you and will be more challenging than your undergraduate courses.

Who is eligible for the BS/MS Program?

Acceptance into the BS/MS Program requires junior or senior-year status and a 3.50 grade point average based on your record at UMCP. The applicant must have completed at least two semesters of CEE undergraduate work at UMCP.

What is the admission procedure?

If you meet the requirements, which are stated above, you can obtain the application form from the CEE Graduate Program Advisor, currently Dr. Torrents (Room 1153), or from Ms. Beaulieu, Assistant Director, Graduate Student Services (Room 1173).

When do I need to decide on applying for admission to the BS/MS program?

The earlier the better! Enrolling earlier ensures the greatest flexibility in course selection and scheduling. To gain the most benefit, you should be making out your schedule to accommodate the program in your third year.

Do I have to take the GREs when applying for graduate school?

Yes! The GREs are required for admission to the graduate school, but not for the initial acceptance into the BS/MS program. Therefore, you will need to take them before applying for admission to the MS part of the BS/MS program.

Do I need to select a research advisor at the start of the BS/MS Program?

You will need approval of a faculty member from the technical specialty that you are selecting. This faculty member will provide guidance in selecting the two graduate courses to use as those that will be part of both your undergraduate and graduate programs. Therefore, you may want to consider selecting in this role someone who you might also want as a research advisor. However, this person may eventually not be your research advisor, so it is not a firm commitment. If you haven't any idea of who to select as an advisor, see the Tech Group Leader:

Environmental	Dr. Seagren
Geotechnical	Dr. Aggour
Project Management	Dr. Skibniewski
Structures	Dr. Amde
Transportation	Dr. G.L. Chang
Water Resources	Dr. McCuen

Will I need to apply to the graduate program if I am accepted into the BS/MS program?

Yes, acceptance into the two programs is administratively separate. Also, you must apply for the graduate program in a timely manner in order to be considered for financial aid.

Can I use 400-level courses as the two double-counting courses?

No, the two courses must be at the 600-level or above.

Do I register for the two graduate-level courses at the same time as I register for the undergraduate courses?

Not quite! You need special permission to register for graduate classes. Your advisor can give this permission and arrange for registering through Mr. Al Santos. However, once these classes have been approved, you must register immediately; if you delay, then the clearance will be dropped.

Can I use the graduate courses as replacements for out-of-track electives?

No, the graduate courses replace the free elective slots in the undergraduate program. They can not be used to replace the in-track core courses or the out-of-track electives.

Can out-of-track graduate courses be used as the double-counting courses?

In some cases this will be approved. They must be approved by your advisor as suitable electives for your graduate program. Approval must be granted prior to taking the courses.

What if I decide not to continue on for the MS degree upon completion of the BS degree?

This is perfectly acceptable. In no way does participating in the BS/MS program obligate you to complete all of the requirements for the MS degree.

Should I begin the research requirement while still in my fourth year?

While it is not absolutely necessary, it will be to your benefit to begin the research as soon as possible.

Can I use the research completed as part of the BS/MS program as part of the research requirement for the Engineering Honors Program?

Yes. Of course the Engineering Honors research will be completed before your BS graduation and may just be a part of the MS thesis research.
