

# DUAL M.S. ENVIRONMENTAL SCIENCE/MASTER OF BUSINESS ADMINISTRATION

The mission of the Dual Degree MS in Environmental Science/MBA program is to educate working engineers and scientists in the engineering and business disciplines that will make them leaders of highly complex technical endeavors within their sponsoring organizations.

The dual degree MS/MBA program will confer two degrees upon its graduates: an MBA and an MS in Environmental Science. Pursuing the dual degree program saves the student several courses compared to pursuing the two degrees separately.

The dual degree MS in Environmental Science/MBA program is designed to be completed in approximately three years. Typically, the Environmental Science classes are completed first, followed by taking the required classes in the MBA program.

## Learning Outcomes

### For the Environmental Science M.S.

1. Apply scientific, mathematical, and sustainability principles to analyze and develop solutions to problems in environmental science and engineering;
2. Critically assess, evaluate, and understand sustainability, ethics, and social justice in environmental science and engineering; and
3. Effectively communicate scientific and engineering principles related to the environment and sustainability.

### For the M.B.A.

- Graduates will possess the knowledge and skills to be able to apply key business concepts in organizational settings.
- Graduates will possess the knowledge and skills to manage in a global economy
- Graduates will possess critical thinking skills and the ability to integrate concepts.
- Graduates will have the ability to communicate effectively.
- Graduates will have the knowledge and skills to function effectively as members, managers, and leaders in the organizations in which they are employed.
- Graduates will be able to incorporate ethical reasoning, social responsibility, and sustainability in making decisions in their organizations.

## Admissions

Both the MBA Program in the College of Business Administration and the MS in Environmental Science Program in the Frank R. Seaver College of Science and Engineering must accept students applying to the dual degree program for admission. Prospective dual degree students should apply first to the MS in Environmental Science degree program. After receiving admission to the MS in Environmental Science degree program and completing 12 semester hours towards the MS degree, students interested in the MS/MBA Dual Degree program should contact Graduate Business Education for admission to the MBA portion of the Dual Degree. Eligibility for the dual degree program is based upon good academic standing (minimum GPA 3.0) in the MS in Environmental Science program

and approval from their respective Seaver College academic advisor. The preferred start term for the MBA portion of the Dual Degree program is the fall term.

The MS in Environmental Science degree program application is online at <https://graduatestudies.lmu.edu/apply> (<https://graduatestudies.lmu.edu/apply/>). Applicants must submit:

- Official transcripts from all colleges and universities attended
- Statement of Intent (approximately 1.5 pages) describing the candidate's background, career goals, and interest in the program
- Two letters of recommendation
- Resume
- Essay discussing how the two degrees fit into applicant's career development

## Graduation Requirements

Students enrolled in the Dual Degree MS/MBA Program are jointly advised by their academic advisor for Environmental Science in Seaver College and the MBA Program advisor in the College of Business Administration. It is recommended that incoming students take 12 semester hours of Environmental Science courses per fall and spring semester and complete the MS in year one of the dual-degree program, then begin the MBA curriculum in year two.

Dual degree students will take a total of 24 semester hours of Environmental Science courses and 36 semester hours of MBA courses. 15 semester hours from the Environmental Science courses will also count towards the emphasis/concentration requirement for the MBA degree. 6 semester hours of the MBA courses that are taken as part of the MBA coursework will also count toward the MS in Environmental Science. Separately, the MS degree requires 30 semester hours and the MBA degree requires 51 semester hours, for a total of 81 semester hours. The Dual Degree program lessens the load by 21 (15+6) semester hours.

## Suggested Curriculum Flowchart for the MS in Environmental Science/MBA Dual Degree Program

Code	Title	Semester Hours
<b>Year 1 (Summer, Fall, and Spring)</b>		
Required Core Courses		
CIVL 601	Sustainable Water Quality and Resources	3
CIVL 605	Aquatic Chemistry	3
ENVS 606	Applied Environmental Microbiology	3
Select one of the following:		0
<i>Thesis Students</i>		
ENVS 696 or CIVL 696	Thesis Defense	
<i>Non-Thesis Students</i>		
ENVS 690 or CIVL 690	Comprehensive Oral Exam	
<i>Elective Courses</i>		
ENVS 607	Environmental Engineering and Science Lab	
ENVS 651	Remote Sensing with Civil Engineering and Environmental Science Applications	

ENVS 652	Spatial Data Analysis and Geographical Information Systems	MBA Elective	3
ENVS 680	Engineering Geology	<i>Spring Semester</i>	
ENVS 681	Ecosystem Services in Urban Landscapes	MBAA 6100	Managing International Business 3
ENVS 682	Urban Coasts: Habitats, Stressors, and Resilience	MBAW 6307	Management Leadership Workshop: Planning Your Future 0
ENVS 683	Environmental Toxicology and Health Risk	<i>Summer Session</i>	
ENVS 684	Climate Change and Impacts	MBAI 691	Comparative Management Systems (CMS) 3
ENVS 686	Climate Change Mitigation	<b>Subtotal</b> 36	
ENVS 687	Climate Change Adaptation and Resilience	<b>Total Semester Hours</b> 45	
ENVS 688	Environmental Health	<b>Notes:</b>	
ENVS 689	Sustainability, Health, and Equity	<ul style="list-style-type: none"> <li>• Students may enroll in up to two CIVL 695 Master Thesis</li> <li>• Students may enroll in up to one CIVL 699 Independent Studies/ENVS 699 Independent Studies with consent of academic advisor (up to 3 semester hours)</li> <li>• Students may enroll in up to one 500- or 600-level course in another graduate program with consent of academic advisor</li> </ul>	
CIVL 608	Contaminant Fate, Transport, and Remediation	The Graduate Program Director for the MS in Environmental Science has the discretion to substitute other Environmental Science coursework based on availability and Frank R. Seaver College of Science and Engineering Dean's office approval.	
CIVL 617	Water Treatment Processes	<b>Total MS Degree Requirement: 24 semester hours + 6 semester hours from MBA, satisfying the MS degree requirement of 30 semester hours</b>	
CIVL 618	Water Reuse and Desalination	<b>Total MBA Degree Requirement: 36 semester hours + 15 semester hours from MS in Environmental Science, satisfying the MBA degree requirement of 51 semester hours</b>	
CIVL 619	Advanced Integrated Water Treatment Systems	Note: When the course requirements outlined above are completed, the student should submit an application for degree to be awarded both the MBA and the MS in Environmental Science. Students must file separately for each degree and both degrees must be awarded in the same term.	
CIVL 625	Applied Fluid Mechanics		
CIVL 626	Surface Water Hydrology		
CIVL 627	Urban Water Systems and Stormwater Management		
CIVL 629	Groundwater Contaminant Transport and Remediation		
CIVL 637	Building Information Modeling		
CIVL 653	Modeling Environmental and Water Resources Systems		
CIVL 671	Air Quality, Control, and Management		
CIVL 672	Sustainable Waste Management		
CIVL 673	Economics of Water and the Environment		
CIVL 674	Sustainable Engineering		
CIVL 636	Nonlinear Structural Analysis		
CIVL 639	Design of Masonry Structures		
CIVL 655	Computational Fluid Dynamics		
CIVL 657	Finite Element Methods		
CIVL 675	Renewable Energy Systems		
CIVL 676	Project Management		
CIVL 678	Research in Civil Engineering & Environmental Science		
<b>Subtotal</b>	9		
<b>Year 2</b>			
<i>Fall Semester</i>			
MBAW 6400	MBA Orientation		0
MBAA 6020	Financial and Managerial Accounting		3
MBAA 6030	Global Economic Structures and Systems		1.5
MBAA 6040	Managing Markets and Customer Relationships		3
MBAA 6050	Managing Operations		1.5
MBAA 6090	Managing Information Systems		3
<i>Spring Semester</i>			
MBAA 6010	Managing People and Organizations		3
MBAA 6060	Strategic Management		3
MBAA 6070	Managing Financial Resources		3
MBAA 6080	Data, Models, and Decisions		3
MBAW 6402	The Elements of Becoming A Strategic Leader		0
<i>Summer Session</i>			
Business & Society Core			3