ENVIRONMENTAL SCIENCE: FOOD SYSTEMS AND SUSTAINABLE AGRICULTURE/PUBLIC POLICY (BS/MPP)

Loyola’s School of Communication, in partnership with the School of Environmental Sustainability, will offer a new program that will enable students to earn an undergraduate and graduate degree in environmental communication in five years.

The new Accelerated Bachelor’s to Master’s program will allow SOC students to earn their undergraduate degree in their declared major, plus a master’s degree in Environmental Science and Sustainability.

Similarly, SES students will earn their undergraduate degree in their declared major, while also earning a master’s degree from the SOC in either the Digital Media and Storytelling or Global Strategic Communication graduate programs.

The School of Communication and School of Environmental Sustainability spent two years developing this unique Accelerated Bachelor’s to Master’s program, joining only a handful of universities across the nation offering such a dual degree. The new program will begin in Fall 2022.

The two schools developed the Accelerated Bachelor’s to Master’s program to train environmental scientists to be better communicators, and communication professionals to better understand environmental science.

While environmental scientists are trained to investigate, analyze data and interpret results, they are not taught how to communicate their results and conclusions in ways that are readily accessible to the general public, CEOs, or legislators.

Equally, while journalists, filmmakers and television producers may have the skills to tell compelling stories, they often lack the scientific background to understand and properly relate the impact of climate change, pollution, and loss of biodiversity.

For students in the School of Communication, the Accelerated Bachelor’s to Master’s program will help deepen their understanding of complex socio-ecological issues and their connection with sustainable development goals, while also expanding their capacity to communicate environmental science and sustainability issues to the world. Such a program can help develop better-informed journalists, documentary filmmakers, television, radio and podcast producers, public relations and advertising professionals, and social media specialists.

For students in the School of Environmental Sustainability, the Accelerated Bachelor’s to Master’s program will help them with writing, public speaking, conference presentations, television and radio interviews, and social media messaging.

These 4+1 programs are uniquely applied and strongly interdisciplinary. They integrate basic science concepts, communication theory and practice, and socio-cultural dimensions to cultivate the interdisciplinary problem-solving and communication skills necessary for developing sustainable solutions. The goals of these programs are to:

- Educate students across the sciences, social sciences and humanities, providing knowledge and interdisciplinary perspectives needed to effectively address complex environmental problems through grounding in solid scientific understanding of ecosystem operation.
- Develop skills in environmental and sustainability sciences including GIS, sustainability tracking, and environmental communications as well as important professional skills, such as interdisciplinary thinking, systems thinking, research design, data collection, data analysis, research ethics, technical writing, and communication.
- Improve communication skills by teaching students how to tell stories through enhanced speaking and presentation methods, better writing, video production, recording podcasts, developing blogs and social media.
- Prepare students for advancement in careers in the public and private sectors, including in government agencies, consulting firms, media organizations, businesses, and not-for-profit organizations.

For more information, email: LoyolaSOC@luc.edu

CURRICULUM

These Accelerated Bachelor's/Master's programs begin with a broad, interdisciplinary undergraduate curriculum drawing on courses in the natural sciences, social sciences, humanities, and business.

Undergraduate service-learning, internships, research, and study abroad provide students with rich, experiential learning opportunities. Students then develop more in-depth understanding of policy issues and the professional skills necessary to influence policy outcomes as part of their graduate studies.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>ENVS</td>
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<tr>
<td>CHEM</td>
<td>Chemical Structure and Properties</td>
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<td>ENVS</td>
<td>Environmental Statistics</td>
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<td>ENVS</td>
<td>Chemistry of the Environment</td>
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<td>ENVS</td>
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<td>ENVS</td>
<td>Principles of Ecology</td>
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<td>Principles of Ecology Lab</td>
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<td>PLSC</td>
<td>Environmental Politics</td>
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<td>ENVS</td>
<td>Plants and Civilization</td>
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<td>ENVS</td>
<td>Soil Ecology</td>
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<tr>
<td>ENVS</td>
<td>Sustainable Agriculture</td>
<td>3</td>
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Select one of the following:

- ENVS 320 Conservation Biology
- ENVS 326 Agroecosystems
- ENVS 327 Food Systems Analysis
ENVS 350F Solutions to Environmental Problems: Food Systems

Justice and Ethics Choice
Select one of the following: 3
- ENVS 284 Environmental Justice
- PHIL 287 Environmental Ethics
- THEO 204 Religious Ethics and the Ecological Crisis

Economics Choice
ENVS 335 Ecological Economics 3
or ECON 328 Environmental Economics

Engaged Learning Choice
Select one of the following: 3
- ENVS 226 Science & Conservation of Freshwater Ecosystems
- ENVS 267 Bird Conservation and Ecology
- ENVS 283 Environmental Sustainability
- ENVS 340 Natural History of Belize
- ENVS 345 Conservation and Sustainability of Neotropical Ecosystems
- ENVS 350A Solutions to Environmental Problems: Water
- ENVS 350B Solutions to Environmental Problems: Biogas
- ENVS 350C Solutions to Environmental Problems: Climate Action
- ENVS 350F Solutions to Environmental Problems: Food Systems
- ENVS 369 Field Ornithology
- ENVS 391 Environmental Research
- ENVS 395 Environmental Internship

Capstone Choice
Select one of the following: 3
- ENVS 390 Integrative Seminar
- ENVS 391C Independent Environmental Research (Capstone)
- ENVS 395C Environmental Internship (Capstone)

Electives 21
See designated elective categories below

BS Electives

Society, Ethics, and Justice
Select one of the following: 3
- COMM 260 Environmental Journalism
- ENVS 204 Gender, Health & Environment
- ENVS 279 / HIST 279E Climate and History
- ENVS 284 Environmental Justice
- ENVS 297 / HIST 297E North American Environmental History
- ENVS 298 Special Topics (with SES approval)
- ENVS 338 Climate Change and Human Health
- ENVS 350A Solutions to Environmental Problems: Water
- ENVS 350B Solutions to Environmental Problems: Biogas
- ENVS 350C Solutions to Environmental Problems: Climate Action
- ENVS 350F Solutions to Environmental Problems: Food Systems
- ENVS 383 Human Dimensions of Conservation
- ENVS 391 Environmental Research (with SES approval)
- ENVS 395 Environmental Internship (with SES approval)
- ENVS 399 Directed Readings (with SES approval)
- COMM 101 Public Speaking & Critical Thinking
- COMM 277 Organizational Communication
- COMM 306 Environmental Advocacy
- COMM 322 Guerilla Media
- ENGL 288 Nature in Literature
- PHIL 287 Environmental Ethics
- PSYC 277 Environmental Psychology
- SOCL 226 Science, Technology, & Society
- SOCL 252 Global Inequalities
- SOCL 272 Environmental Sociology
- SOCL 276 The Sociology and Politics of Food
- SOCL 278 Global Health
- THEO 204 Religious Ethics and the Ecological Crisis
- THEO 344 Theology and Ecology

Policy, Economics, and Resource Management
Select one of the following: 3
- ENVS 298 Special Topics (with SES approval)
- ENVS 300 Introduction to Public Health
- ENVS 310 Introduction to Environmental Law & Policy
- ENVS 311 Natural Resources and Land Use Law & Policy
- ENVS 312 Water Law & Policy
- ENVS 313 Energy Law & Policy
- ENVS 327 Food Systems Analysis
- ENVS 332 Industrial Ecology
- ENVS 333 Introduction to the Circular Economy
- ENVS 335 Ecological Economics
- ENVS 336 Design for Circular & Sustainable Business
- ENVS 338 Climate Change and Human Health
- ENVS 351 Introduction to Sustainability Concepts & Impacts

MPP Requirements

Core Requirements
- MPP 400 Policy Design and Analysis 3
- MPP 401 Analytical Tools in Public Policy 3
- MPP 403 Public Budget and Finance 3
- MPP 404 Public Policy Process 3
- MPP 405 Statistical Methods & Analysis for Public Policy I 3
- MPP 406 Statistical Methods & Analysis Public Policy II 3
- MPP 500 Public Policy Evaluation 3
- MPP 502 Professional Development Skills 1
- MPP 501 Public Policy Internship 3
or MPP 503 Public Policy Practicum

Electives
Select four from list of Electives 12

Total Hours 116
ENVS 363 Sustainable Business Management
ENVS 364 Sustainability Management in the Global Context
ENVS 383 Human Dimensions of Conservation
ENVS 384 Conservation Economics
ENVS 389 Ecological Risk Assessment
ENVS 391 Environmental Research (with SES approval)
ENVS 395 Environmental Internship (with SES approval)
ENVS 398 Special Topics (with SES approval)
ENVS 399 Directed Readings (with SES approval)
ECON 328 Environmental Economics
COMM 379 Digital Sustainability
GLST 305 Globalization and Environmental Sustainability
MGMT 201 Managing People and Organizations
PLSC 354 Ecological Risk Assessment

Environmental Electives
Select one of the following: 3

ENVS 204 Gender, Health & Environment
ENVS 218 Biodiversity & Biogeography
ENVS 224 Climate & Climate Change
ENVS 226 Science & Conservation of Freshwater Ecosystems
ENVS 267 Bird Conservation and Ecology
ENVS 273 Energy and The Environment
ENVS 283 Environmental Sustainability
ENVS 298 Special Topics (with SES approval)
ENVS 300 Introduction to Public Health
ENVS 301 Environmental Health
ENVS 303 Introduction to Epidemiology
ENVS 319 Winter Ecology
ENVS 320 Conservation Biology (if not used above)
ENVS 322 Invasive Species
ENVS 323 Environmental Microbiology
ENVS 326 Agroecosystems (if not used above)
ENVS 327 Food Systems Analysis (if not used above)
ENVS 330 Restoration Ecology
ENVS 340 Natural History of Belize
ENVS 345 Conservation and Sustainability of Neotropical Ecosystems
ENVS 350A Solutions to Environmental Problems: Water
ENVS 350B Solutions to Environmental Problems: Biogas
ENVS 350C Solutions to Environmental Problems: Climate Action
ENVS 350F Solutions to Environmental Problems: Food Systems
ENVS 369 Field Ornithology
ENVS 380 Introduction to Geographic Information Systems
ENVS 381 Advanced GIS Applications
ENVS 382 Remote Sensing
ENVS 383 Human Dimensions of Conservation
ENVS 384 Conservation Economics
ENVS 385 Introduction to Global Health
ENVS 387 Principles of Ecotoxicology
ENVS 388 Applied Environmental Statistics
ENVS 389 Ecological Risk Assessment

ENVS 391 Environmental Research (with SES approval)
ENVS 395 Environmental Internship (with SES approval)
ENVS 398 Special Topics (with SES approval)
ENVS 399 Directed Readings (with SES approval)
ANTH 104 The Human Ecological Footprint
ANTH 303 People and Conservation
BIOL, CHEM, PHYS 300-level courses (with SES approval)

Total Hours 12

MPP Electives
Students are required to take 12 hours of electives. Electives can be
drawn from many departments across the university, including criminal
justice, education, environmental studies, political science, public
health, psychology, sociology and social work. These electives are where
students can focus on their preferred field of policy. The following are
some examples of optional courses:

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<tr>
<td>ENVS 410</td>
<td>Introduction to Environmental Law &amp; Policy</td>
<td>3</td>
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<tr>
<td>ENVS 412</td>
<td>Water Law &amp; Policy</td>
<td>3</td>
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<tr>
<td>MPBH 400</td>
<td>Determinants of Population Health</td>
<td>3</td>
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<tr>
<td>MPBH 407</td>
<td>Public Health Policy: Concepts and Practice</td>
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<tr>
<td>CJC 401</td>
<td>Politics and Policies in the Criminal Justice System</td>
<td>3</td>
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<tr>
<td>CJC 402</td>
<td>Theories of Criminal Behavior</td>
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<tr>
<td>MPP 407</td>
<td>Local Economic Development</td>
<td>3</td>
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<tr>
<td>MPP 414</td>
<td>Affordable Housing Finance and Policy</td>
<td>3</td>
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<tr>
<td>ELPS 405</td>
<td>Introduction to Educational Policy Analysis</td>
<td>3</td>
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<tr>
<td>ELPS 412</td>
<td>Urban Education Policy</td>
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<tr>
<td>SOWK 730</td>
<td>Immigration Dynamics and U.S. Social Policy</td>
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<tr>
<td>SOWK 732</td>
<td>Migration, Social Justice, and Human Rights</td>
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</tbody>
</table>

Guidelines for Accelerated Bachelor’s/
Master’s Programs

Terms
- Accelerated Bachelor's/Master's programs: In this type of program,
students share limited credits between their undergraduate and
graduate degrees to facilitate completion of both degrees.
- Shared credits: Graduate level credit hours taken during the
undergraduate program and then applied towards graduate program
requirements will be referred to as Shared credits.

Admission Requirements
Accelerated Bachelor's/Master's programs are designed to enhance
opportunities for advanced training for Loyola's undergraduates.
Admission to these programs must be competitive and will depend upon
a positive review of credentials by the program's admissions committee.
Accordingly, the admission requirements for these programs may be
higher than those required if the master's degree were pursued entirely
after the receipt of a bachelor's degree. That is, programs may choose
to have more stringent admissions requirements in addition to those minimal requirements below.

Requirements:

- Declared appropriate undergraduate major,
- By the time students begin taking graduate courses as an undergraduate, the student has completed approximately 90 credit hours, or the credit hours required in a program that is accredited by a specialty organization,¹
- A minimum cumulative GPA for coursework at Loyola that is at or above the program-specific requirements, a minimum major GPA that is at or above the program-specific requirements, and/or appropriate designated coursework for evaluation of student readiness in their discipline.²

Students not eligible for the Accelerated Bachelor's/Master's program (e.g., students who have not declared the appropriate undergraduate major) may apply to the master's program through the regular admissions process. Students enrolled in an Accelerated Bachelor's/Master's program who choose not to continue to the master's degree program upon completion of the bachelor's degree will face no consequences.³

Ideally, a student will apply for admission (or confirm interest in proceeding towards the graduate degree in opt-out programs) as they approach 90 credit hours. Programs are encouraged to begin advise students early in their major so that they are aware of the program and, if interested, can complete their bachelor's degree requirements in a way that facilitates completion of the program. Once admitted as an undergraduate, Program Directors should ensure that students are enrolled using the plan code associated with the Accelerated Bachelor's/ Master's program. Using the plan code associated with the Accelerated Bachelor's/Master's program will ensure that students may be easily identified as they move through the program. Students will not officially matriculate into the master's degree program and be labeled as a graduate student by the university, with accompanying changes to tuition and Financial Aid (see below), until the undergraduate degree has been awarded. Once admitted to the graduate program, students must meet the academic standing requirements of their graduate program as they complete the program curriculum.

¹ Programs that have specialized accreditation will adhere to the admissions criteria provided by, or approved by, their specialized accreditors.
² The program will identify appropriate indicators of student readiness for graduate coursework (e.g., high-level performance in 300 level courses). Recognizing differences between how majors are designed, we do not specify a blanket requirement.
³ If students choose not to enroll in the Accelerated Bachelor's/Master's program, they still must complete all of the standard requirements associated with the undergraduate degree (e.g., a capstone).

Curriculum

Level and progression of courses. The Accelerated Bachelor's/Master's programs are designed to be competitive and attractive to our most capable students. Students admitted to Accelerated Bachelor's/ Master's programs should be capable of meeting graduate level learning outcomes. Following guidance from the Higher Learning Commission, only courses taken at the 400 level or higher (including 300/400 level courses taken at the 400 level) will count toward the graduate program.¹,²

Up to 50% of the total graduate level credit hours, required in the graduate program, may come from 300/400 level courses where the student is enrolled in the 400 level of the course. Further, at least 50% of the credit hours for the graduate program must come from courses that are designed for and restricted to graduate students who have been admitted to a graduate program at Loyola (e.g., enrolled in plan code that indicates the Accelerated Bachelor's/Master's program, typically ending with the letter "D").³

In general, graduate level coursework should not be taken prior to admission into the Accelerated Bachelor's/Master's program. Exceptions may be granted for professional programs where curriculum for the Accelerated Bachelor's/Master's program is designed to begin earlier. On the recommendation of the program's Graduate Director, students may take one of their graduate level courses before they are admitted to the Accelerated Bachelor's/Master's program if they have advanced abilities in their discipline and course offerings warrant such an exception.⁴

Undergraduate degree requirements outside of the major are in no way impacted by admission to an Accelerated Bachelor's/Master's program.⁵

Shared credits. Undergraduate courses (i.e., courses offered at the 300 level or below) cannot be counted as shared credits nor count towards the master's degree. Up to 50% of the total graduate level credit hours, required in the graduate program, may be counted in meeting both the undergraduate and graduate degree requirements. Of those shared credits, students in an Accelerated Bachelor's/Master's program should begin their graduate program with the standard introductory course(s) for the program whenever possible. So that students may progress through the Accelerated Bachelor's/Master's program in a timely manner, undergraduate programs are encouraged to design their curriculum such that a student can complete some required graduate credit hours while completing the undergraduate degree. For instance, some of the graduate curriculum should also satisfy electives for the undergraduate major.

The program's Graduate Director will designate credit hours to be shared through the advising form and master's degree conferral review process. Shared credit hours will not be marked on the undergraduate record as having a special status in the undergraduate program. They will be included in the student's undergraduate earned hours and GPA. Graduate credit hours taken during the undergraduate program will not be included in the graduate GPA calculation.

¹ If students wish to transfer credits from another university to Loyola University Chicago, the program's Graduate director will review the relevant syllabus(es) to determine whether it meets the criteria for a 400 level course or higher.
² Programs with specialized accreditation requirements that allow programs to offer graduate curriculum to undergraduate students will conform to those specialized accreditation requirements.
³ In rare cases, the Graduate Director may authorize enrollment in a 400-level course for a highly qualified and highly motivated undergraduate, ensuring that the undergraduate's exceptional participation in the graduate class will not diminish in any way the experience of the graduate students regularly enrolled.
⁴ For example, if a particular course is only offered once every 2-3 years, and a student has demonstrated the necessary ability to be successful, the Graduate Director may allow a student to take a graduate level course to be shared prior to the student being formally admitted to the graduate program. See, also, footnote 4.
⁵ Students should not, for example, attempt to negotiate themselves out of a writing intensive requirement on the basis of admission to a graduate program.
Graduation
Degrees are awarded sequentially. All details of undergraduate commencement are handled in the ordinary way as for all students in the School/College/Institute. Once in the graduate program, students abide by the graduation deadlines set forth by the graduate program. Students in these programs must be continuously enrolled from undergraduate to graduate degree program unless given explicit permission by their program for a gap year or approved leave of absence.

School of Environmental Sustainability Graduation Requirements
All SES students are required to complete a foreign language requirement and a writing intensive requirement. The SES language requirement can be fulfilled by 1) earning college credit at the 102-level or above; or 2) demonstrating proficiency via the SES foreign language proficiency examination. The SES writing intensive requirement is fulfilled by successfully completing two Loyola WI courses (max of one per semester). Writing intensive courses have a "W" in the section number.

Additional Undergraduate Graduation Requirements
All Undergraduate students are required to complete the University Core, at least one Engaged Learning course, and UNIV 101. SCPS students are not required to take UNIV 101. Nursing students in the Accelerated BSN program are not required to take core or UNIV 101. You can find more information in the University Requirements (https://catalog.luc.edu/undergraduate/university-requirements/) area.

LEARNING OUTCOMES
• Explain the components of food systems and their complex interactions across spatial and temporal scales.
• Articulate the physical, psychological, cultural, and spiritual significance of food to individual and community wellbeing.
• Using multiple methods of analysis, evaluate the environmental and equity impacts of different food system practices to reveal points of leverage for social-ecological change.
• Engage knowledge, skills, and values through experiences that advance sustainability, resilience, and justice within food systems.

SES Shared Learning Outcomes
All SES majors share the following Program Learning Objectives, in addition to their unique major-specific Program Learning Objectives:

1. Articulate the foundational principles of natural and social sciences and humanities essential to solving environmental problems.
2. Critically evaluate the accuracy and credibility of information relating to environmental topics.
3. Employ knowledge and skills to design and implement solutions that contribute to a just and sustainable world.
4. Exemplify the values of environmental and social justice through actions to care for our common home and one another.