

**UNIVERSITY OF NORTHERN IOWA**  
**CERTIFICATE IN SUSTAINABILITY REQUIREMENTS LIST 2022-2023**

Course number (semester)	Title	Semester offered	Instructor	Credit hours	pre-reqs?
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1. **Sign up** in your department using the 'Declaration of Curriculum' form to **ADD** the Program Certificate: Sustainability
2. **Take** 1 Required + 4 Electives (**must pick from at least 3 Content Streams**) using your **College Advisor's** guidance
3. **Submit** list of courses taken and grades achieved to Prof. Betrabet [betrabet@uni.edu](mailto:betrabet@uni.edu) 273-2603 Latham 213
4. **Write** a summary reflection using format that will be provided to you and submit it as the last step

**1. TAKE THE REQUIRED INTRO CLASS**

TECH 1015	Introduction to Sustainability	Fall and Spring	Brian Rumsey	3	UNIFI
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**2. PICK 4 ELECTIVES**

- Take no more than 2 from one Content stream.
- Overall selection must cover at least 3 Content Streams
- Take a look at the pre-requisites needed before making a selection

**Content Stream 1: Natural and Biological Environments**

BIOL 1012/1013	Life the Natural World + Lab	Fall and Spring	Variable	4	UNIFI
BIOL 1014/1015	Life Continuity and Change + Lab	Fall and Spring	Variable	4	UNIFI
EARTHSCI 1440	Introduction to Environmental Earth Science	Fall and Spring	C. Heinzl	3	UNIFI
PHYSICS 1000	Physics and Everyday Life	Fall and Spring	Variable	3	UNIFI
GEOG 2250*	Nature-Society Relations ( This class from UNIFI can satisfy Content Stream 1 or 6)	Spring	Mark Welford	3	UNIFI
BIOL 3100	Evolution, Ecology and the Nature of Science	Fall and Spring	Mark Myers, Jim Demastes, Peter Berendzen, Steve O'Kane, Jeff Tamplin	3	BIOL 2051 (840:051); BIOL 2052 (840:052); CHEM 1110 (860:044) and CHEM 1120 (860:048), or CHEM 1130 (860:070). BIOL 3100 (840:100) and BIOL 3140 (840:140) cannot be taken concurrently.
BIOL 4167/5167	Conservation Biology	Even Falls	Mark Myers	3	
BIOL 4159/5159	Biodiversity Conservation Policy	Spring	Mark Myers	3	BIOL3100; BIOL 3140; junior standing (Discuss "hidden" pre-reqs BIOL 2051 and BIOL 2052)
BIOL 4105/5105	Wildlife Ecology & Management	Fall	Mark Myers	3	BIOL3100; BIOL 3140; junior standing
EARTHSCI 1300	Introduction to Geology	Fall and Spring	C. Heinzl/ M. Iqbal	4	
GEOG 2210	Recent Climate Change	Fall	Mark Welford	3	
GEOG 3310	Geographic Information Systems I	Fall	Andrey Petrov	3	
GEOG 4310/5310	GIS Applications (Variable Topic)	Spring	Andrey Petrov	3	
PHE 3710/5710	Environmental Health Science	Fall	Michaela Rich	3	junior standing. (Same as <a href="#">ENV SCI 4665/5665 (830:165g)</a> )
PH3730/5730	Toxins and Health	Spring	Michaela Rich	3	junior standing.

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<b>Content Stream 2: Mathematical and Economic Dimensions of Sustainability</b>					
STAT 3771/5771	Applied Statistical Methods for Research	Fall/ Spring	Mark Ecker	3	STAT 1774 or STAT 1772; junior-standing
ACC 2130	Principles of Managerial Accounting	Fall and Spring	Lee Wang, Michelle Hovenga, Lee Nicholas and Eric Lee*	3	Sophomore standing; C- or better in Acct 2120 (Note: Acct 2120 is part of Business Core)
ACC 3130	Cost Accounting	Fall	Eric Lee*	3	Junior standing; Acct 2120; Acct 2130 (which requires C- or better in ACCT 2120). (Note: Acct 2120 and 2130 are part of the Business Core.)
ECON 3159	Economics of Sustainability	Spring	Alicia Rosburg	3	Principles of Macroeconomics (Econ 1041) or Principles of Microeconomics (Econ 1051) or Introduction to Economics (Econ 1031).
ECON 3225	Environmental Economics	Fall	Alicia Rosburg	3	Econ 1041, Econ 1051, junior-standing (waivers subject to instructor and department head consent; prereqs are part of the Business Core)
MGMT 3167	Global Supply Chain Management	Spring	Andy Anderson	3	ACCT 2120; ACCT 2130 (requires C- or better in ACCT 2020); MGMT 2080; STAT 1772 or equivalent; ECON 1011; ECON 1021; Junior standing. MGMT 3154 (which requires CBA Admittance) (Note: all prereqs are part of the Business Core)
MKTG 3163	Distribution and Logistics	Fall	Karthik Iyer	3	MKTG 2110; ECON 1031 or ECON 1041; junior-standing (Note: MKTG 2110 and Econ 1041 are part of the Business Core; Econ 1031 is part of the LAC)
BIOL 4157/ 5157	Biostatistics	Fall	Kenneth Elgersma	3	MATH 1140 or MATH 1120 and MATH 1130 or MATH 1420 or equivalent; BIOL3100; BIOL 3140; junior standing
TEXDSGN 3011	Fashion Trend Analysis	Variable	Annette Lynch	3	TEXDSGN 1004.
<b>Content Stream 3: Urban Environments and Technology</b>					
CAP 3140	Environment, Technology, and Society	Fall, Spring and Summer	Ali Kashef Mohammad Iqbal Laura Jackson Ai Wen Kamyar Enshayan Chad Heinzl	2 or 3	student must have satisfied university entrance requirements in English and Mathematics; completion of both Liberal Arts Core Life Sciences and Physical Sciences requirements; junior standing.
EARTHSCI 3400	Natural Resources and Civilizations	Fall, Spring, Summer	Chad Heinzl	3	Junior standing
GEOG 3220	Environmental Geography	Fall	Thomas Larsen	3	<a href="#">GEOG 1120 (970:010)</a> or <a href="#">GEOG 1210 (970:026)</a> or <a href="#">GEOG 2210 (970:028)</a> or <a href="#">GEOG 1110 (970:040)</a> or consent of instructor.

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GEOG 4170/ 5170	Climate Action Planning	Spring	Alex Oberle	3	Junior Standing
GEOG 1059/6286	Environmental Data Analysis	Spring	James Dietrich	3	
INTDSGN 1001/ INTDSGN 1059	Introduction to Interior Design/ Introduction to Applied Design	Fall	Alexandra Dooley/ Staff	3	
PHYSICS 4300/5300	Introduction to Electronics	Fall	Tim Kidd	4	<a href="#">PHYSICS 1512 (880:056)</a> or <a href="#">PHYSICS 1702 (880:131)</a> ; <a href="#">MATH 1421 (800:061)</a> ; junior standing.
PHYSICS 4310/5310	Physical Computing	Odd Springs	Tim Kidd	3	<a href="#">PHYSICS 1511 (880:054)</a> and <a href="#">PHYSICS 1512 (880:056)</a> , or <a href="#">PHYSICS 1701 (880:130)</a> and <a href="#">PHYSICS 1702 (880:131)</a> ; junior standing.
TECH 3102/ CAP 3102	Living in Our Techno-Social World	Fall, Spring and Summer	Doug Hotek Ali Kashef	3	
TECH 3180	Lean and Sustainable Operations	Spring	Julie Zhang	3	<a href="#">TECH 3143</a> ; <a href="#">MATH 1150 (800:048)</a> or <a href="#">MATH 1420 (800:060)</a> or <a href="#">STAT 1772 (800:072)</a> ; junior standing or consent of instructor.
TECH 1010	Metal Removal Processes	Fall and Spring	Srikant Rukmini Revuru	3	
TECH 3148	Machine Design	Fall	P. N. Rao	3	MATH 1150 or MATH 1420; PHYSICS 1511 or 1701; TECH 2080; junior standing or consent of instructor
<b>Content Stream 4: Sustainable Tourism and Outdoor Recreation</b>					
RTNL 4554/5554	Managing Recreation Impacts on the Natural Environment	Fall	Kathy Scholl	3	Junior standing
RTNL 4778/7778	Community Based Tourism	Spring	Oksana Grybovych	3	Junior standing
RTNL 4776/6776	Eco, Adventure and Sport Tourism	Fall	Oksana Grybovych	3	<a href="#">LYHS 2770 (430:070)</a> or consent of instructor; junior standing.
<b>Content Stream 5: Teacher Education in Sustainability and Environmental Literacy</b>					
CAP 3131	Analysis of Social Issues	Fall and Spring	David Grant	3	
RTNL 4552/5552	Theory and Practice of Experiential Education	Spring	Kathy Scholl	3	Junior Standing
INSTTECH 1031	Educational Technology and Design	Fall, Spring, Summer	Leigh Zeitz	3	None
SPAN 3023	Culture and Civilization of Spain	Fall	Juan Carlos Castillo	3	
<b>Content Stream 6: Social, Philosophical, and Political Dimensions of Sustainability</b>					
ECON 1001	Economics of Social Issues	Fall and Spring	Variable	3	UNIFI
EARTHSCI 3336	Natural Resources and Civilizations	Spring	Variable	3	UNIFI
HIST 3110	Conflict and Justice in History	Fall and Spring	Variable	3	UNIFI
PHIL 1560	Science, Technology, and Ethics	Fall and Spring	Variable	3	UNIFI

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GEOG 2250*	Nature-Society Relations ( This class from UNIFI can satisfy Content Stream 1 or 6)	Spring	Mark Welford	3	UNIFI
HISUS 4170/5170	U.S. Environmental History	variable	B. Cutter/ B Roberts	3	Junior Standing
PH 3720/5720	Environmental and Occupational Health Regulations	Spring, odd years	Michaela Rich	3	junior standing. (Same as <a href="#">ENV SCI 4666/5666 (830:166g)</a> )
HUM 1023	The Age of the Revolution to the Present	Fall, Spring, Summer	Yasemin Sari	3	None
POL AMER 1048	Introduction to Public Administration	Fall and Spring	Jayne Renfro	3	None
PHIL 1020	Philosophy, the Art of Thinking	Fall, Spring, Summer	Yasemin Sari, Francis Degnin	3	None
CAP 3173/ PHIL/ RELS 3510	Bioethics	Fall and Spring	Francis Degnin	3	junior standing. (Same as RELS 3510 (640:173) and PHIL 3510 (650:173))
ENGL 4110/5110	Environmental Literature	Variable	Jeremy Schraffenberger David Grant	3	ENG 2120 or consent of instructor; junior standing
GEOG 4115/5115	Climate Change and Social Justice	Fall	Lisa Tabor	3	
<b>TOTAL CERTIFICATE HOURS</b>				<b>14 to 15</b>	
<ul style="list-style-type: none"> <li>• Upon completion of all courses in the Certificate, contact Prof. Betrabet at <a href="mailto:betrabet@uni.edu">betrabet@uni.edu</a> to obtain the formal for a Final Reflection</li> <li>• Submit a list of courses you eventually took along with semester and the grade earned, and the Final Reflection.</li> <li>• If any course substitutions are needed, she will process it for you - but you must meet with her to get this done.</li> <li>• Your successful completion will be notified to the Registrar's office</li> </ul>					

**Some courses are multi-section, or are not taught every year by the same instructor. Credit for the Certificate only valid for sections taught by instructors listed here. Some of these courses may have pre-requisites or other requirements as listed. Consult your College Advisors during your planning. Some courses may be offered in semesters other than mentioned here. Work with your advisor to get the option that is best for you.**

**COLLEGE ADVISORS**

**College of Humanities Arts and Sciences**

David Grant [david.grant@uni.edu](mailto:david.grant@uni.edu)  
 Chad Heinzl [chad.heinzl@uni.edu](mailto:chad.heinzl@uni.edu)  
 Mark Myers [mark.myers@uni.edu](mailto:mark.myers@uni.edu)

**College of Business**

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 Wee Meng Eric Lee [eric.lee@uni.edu](mailto:eric.lee@uni.edu)

**College of Education**

Alicia Rosburg [alicia.rosburg@uni.edu](mailto:alicia.rosburg@uni.edu)

**College of Social and Behavioral Sciences**

Gowri Betrabet Gulwadi [betrabet@uni.edu](mailto:betrabet@uni.edu) Coordinator for Certificate

## **Questions about UNIFI Certificate in Sustainability (9 credits) vs University-wide Certificate in Sustainability (15 credits)**

We now offer a [General Education Certificate called Sustainability](#) (9 credits) in the UNIFI with the following requirements:

### **Requirement 1 – 3 credits**

- TECH 1015 Introduction to Sustainability

### **Requirement 2 (choose one) – 3 credits**

- BIOL 1012/1013 Life: The Natural World + Lab
- BIOL 1014/1015 Life: Continuity and Change + Lab
- EARTHSCI 1440 Introduction to Environmental Earth Science
- GEOG 2250 Nature-Society Relations
- PHYSICS 1000 Physics and Everyday Life

### **Requirement 3 (choose one) – 3 credits**

- EARTHSCI 3336 Natural Resources and Civilizations
- ECON 1001 Economics of Social Issues
- HIST 3110 Conflict and Justice in History
- PHIL 1560 Science, Technology, and Ethics

Students can deepen their understanding with the University level Certificate in Sustainability (15 credits). The university level certificate builds directly off the UNIFI Certificate by adding 6 more credits and is an **additional** credential reported on the transcript.

If a student completes the UNIFI Certificate in Sustainability, they satisfy the required Introduction to Sustainability class plus an elective in both Content Areas 1 and 6 (**all 9 credits carry over**). The student will then need **TWO** more electives to complete the University-wide Certificate in Sustainability. Students need to work with an advisor to select the elective classes and to make sure sufficient Content Areas are covered.