SEAS SCHOOL FOR ENVIRONMENT AND SUSTAINABILITY
UNIVERSITY OF MICHIGAN

Environmental Informatics

Requirements		Notes	Course	Credits	Term
EI Core	Environmental Informatics Core courses	EAS 541.001 Remote Sensing EAS 531.001 Principles of GIS			
SEAS Core	EAS 509 (Natural Systems Core) EAS 510 (Social Systems Core) or a course from the Social Systems distribution list				
	IAMS Requirement * Two courses; 3CR minimum Please see other side of form for approved courses.				
Electives	Electives	Must be a graduate level course at 400-level and above. At least 6 credits taken from the following course: EAS 501.034 EAS 501.001 (F19) EAS 501.015/018 EAS 534 EAS 540 EAS 543 EAS 545 EAS 549 EAS 639.006** Full list of non-SEAS elective courses on 2nd page			
Analytics	Statistics	EAS 538			
Capstone or Non-capstone	Capstone	Option 1: Option 1: At most 6 credit hours of EAS 701 (Master's Project) or EAS 702 (Master's Practicum) or At most 12 credits of EAS 700 (Master's Thesis).			
	Non-capstone	Option 2: Additional approved courses to total 42 credits.			
TOTALS	TOTAL "EAS" CREDIT HOURS	Minimum 25 of 42 credit hours			
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* IAMS courses can double-count with Core requirements but we do not double-count the actual credits.
**Any waiver or substitution of degree requirement must be approved by both the Graduate Advisor and EI Program Coordinator and submitted to OAP.

Course List

Environmental Informatics Core Courses

EAS 541.001 Remote Sensing W (4)
EAS 531.001 Principles of GIS F & W (4)

Elective Courses:

EAS 501.001 "Intro to Rhinoceros 3D" (F19)
EAS 501.015/018 "Geovisualization for Environ & Society
EAS 501.034 "Field Remote Sensing & Analysis, SP
EAS 620 "AR/VR for Sustainab", W 2CR
EAS 534
EAS 540
EAS 543
EAS 545
EAS 549
EAS 639.006 "Python Programming", W
CMPLXSYS 511 "Theory of Complex Systems"
CMPLXSYS 530 "Computer Modeling of Complex Systems"
CMPLXSYS 575 "Sensors, Data, and Intelligent Systems"
EECS 430 "Radiowave Propagation and Link Design"
EECS 532 "Radar Remote Sensing"
SI 506 "Programming I"
SI 507 "Interm Programming"
SI 538 "Citizen Design Interaction"
SI 618 "Data Manipulation and Analysis"
SI 649 "Information Visualization"
SI 671 "Data Mining: Methods and Applications"
SI 696 "Big Data Analytics"
CLIMATE 585 "Intro to Remote Sensing & Inversion Theory

To count toward EI Field of Study-specific elective requirement, EAS 639 seminar must be approved by the EI Field of Study Coordinator

Integrated Analytic Methods and Skills Requirement

Students are required, at some point during their time enrolled in the program, to take 2 courses composing at least 3 credits from a faculty-approved list of courses that focus on integrative analytic methods and skills. The faculty-approved existing courses that satisfy this requirement are listed below:

Fall

447 – Forest Ecology Management
501 – Ecological Restoration Applications
501 – Multivariate Stats for Environmental Science (in 2020)
523 – Ecological Risk Assessment
530 - Decision-Making for Sustainability
531 – Principles of GIS
533 – Negotiation Skills
535 – Mediation Skills
552 – Ecosystem Services
553 – Diverse Farming Systems
564 – Localization Seminar
567 – Social Vulnerability & Adaptation to Environ Change
570 – Environmental Economics
572 – Environmental Impact Assessment
576 – Sustainability Finance
578 – Urban Stormwater (every other year)
597 – Environmental Systems Analysis
677 – Climate Adaptation Seminar
687 – Landscape Planning

Winter

501 – Science and Management of the Great Lakes

501 – The Hydrologic Cycle and Water Res Mgmt
531 – Principles of GIS
532 – Natural Resource Conflict Management
541 – Remote Sensing
545 - Applied Ecosystem Modeling
549 – Analysis and Modeling of Ecological Data
550 – Systems Thinking for Sustainable Development
557 – Industrial Ecology
569 – Stakeholder Network Analysis
575 – Climate Economics and Policy
581 – Advanced Education for Environment and Sustainability
610 – Advanced LCA Methods and Software Tools
641 – Social Research Methods in Environment and Sustainability
787 – Metro Studio (MLA only)