

ARCH Innovation Exchange / Division of Integrative Programs

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The Division of Integrative Programs (DIP), housed within the ARCH Innovation Exchange, serves as the academic home for interdisciplinary programs that operate across traditional departmental and school boundaries. The Division supports fields of study that integrate knowledge, methods, and perspectives from multiple disciplines to address complex contemporary challenges.

DIP programs are collaboratively developed and delivered by faculty from across the University and are jointly administered through the ARCH Innovation Exchange and the Kakos School of Arts and Sciences. By combining technical expertise, analytical thinking, creativity, and human-centered perspectives, these programs prepare students to work effectively across disciplines and adapt to emerging professional fields.

The Division provides academic coordination, advising support, assessment, and program development for its interdisciplinary offerings while maintaining strong partnerships with participating departments and schools throughout the University.

Majors

- B.S in Computational Neuroscience
- B.S. in Data Science
- B.S. in Integrated Marketing Communication

Minors

- Artificial Intelligence
- Quality Science
- Sustainability Studies

B.S in Computational Neuroscience

The B.S. in Computational Neuroscience is an interdisciplinary program focused on understanding brain and cognitive function through experimental and theoretical approaches. Students examine how neural systems give rise to perception, cognition, and behavior, and how biological and behavioral data can be analyzed and explained using computational and mathematical models.

The program builds a strong foundation in the natural sciences, mathematics, statistics, and programming while studying the brain across multiple levels—from neural circuits and systems to cognition and behavior. Coursework in behavioral, systems, and computational neuroscience combines experimental study with modeling, simulation, and data analysis.

Students develop skills in experimental design, quantitative reasoning, and computational modeling, with opportunities to explore areas such as physiology, sensation and perception, neurobiology, machine learning, image analysis, and neurotechnology.

The major prepares students for graduate study in neuroscience, cognitive science, psychology, and biomedical fields, as well as careers in neurotechnology, artificial intelligence, data science, and brain- and behavior-related health fields. Students also engage with the ethical and societal dimensions of neuroscience and neurotechnology, including mental health, human–machine interaction, and the responsible use of data-driven models of the mind.

Curriculum

Natural Science Foundations (25 Credits)

BIOL 111 & BIOL 191	General Biology I and General Biology I Lab	4
BIOL 112 & BIOL 192	General Biology II and General Biology II Lab	4
BIOL 217 & BIOL 297	Genetics and Genetics Lab	4
CHEM 101 & CHEM 103	General Chemistry I and General Chemistry Laboratory I	4
PHYS 101 & PHYS 191 or PHYS 107 & PHYS 193	Physics I and Physics I Lab Introduction to Physics I and Introduction to Physics I Lab	4
PHYS 102 & PHYS 192 or PHYS 108 & PHYS 194	Physics II and Physics II Lab Introduction to Physics II and Introduction to Physics II Lab	4
SCI 100	Science Orientation Seminar I	1

Mathematical & Computational Foundations (21 Credits)

MATH 185	Calculus I	4
MATH 186	Calculus II	4
MATH 285	Calculus III	4
MATH 336	Applied Statistics	3
CMPT 101	Computer Science I	3
CMPT 102	Computer Science II	3

Neuroscience Core (19 Credits)

PSYC 150	Roots: Psychology	3
PSYC 435	Behavioral Neuroscience	3
PSYC 340	Cognition and Learning	3
BIOL 405 & BIOL 485	Neurobiology and Neurobiology Laboratory	4
NEUR 360	(Systems Neuroscience)	
NEUR 490	(Senior Seminar & Capstone Project)	

Computational & Modelling Methods (6 Credits)

MATH 457	Machine Learning	3
NEUR 460	(Computational Methods in Neuroscience)	

Cross-disciplinary Electives (3-4 Credits)

PSYC 332	Artificial Psychology	3-4
or PSYC 467	Sensation and Perception	
or BIOL 320	Animal Physiology	
& BIOL 390	and Animal Physiology Laboratory	
or BIOL 321	Molecular Cell Biology	
& BIOL 391	and Molecular Cell Biology Lab	
or BIOL 326	Animal Behavior	
& BIOL 396	and Animal Behavior Laboratory	
or CMPT 335	Discrete Structures	
or CMPT 465	Neural Networks and Learning Systems	
or CMPT 485	Deep Learning & Generative AI	
or MATH 286	Differential Equations	
or MATH 331	Probability	
or MATH 372	Linear Algebra I	
or MATH 456	Mathematical Modeling	
or EECE 404	Bioinstrumentation	
or EECE 457	Bioinspired Robotic Vision Systems	

Liberal Arts (39 Credits)

PHIL 201	Ethics	3
KSAS Core Curriculum		36
Free Electives (9-10 Credits)		9-10

Plan of Study**Freshman**

Fall	Credits	Spring	Credits
ENGL 110		3 ENGL 150	3
MATH 185		4 MATH 186	4
BIOL 111		4 BIOL 112	4
& BIOL 191		& BIOL 192	
PSYC 150		3 RELS 110	3
SCI 100		1 CMPT 101	3
	15		17

Sophomore

Fall	Credits	Spring	Credits
PSYC 435		3 NEUR 360 (Systems Neuroscience)	3
PHYS 101		4 PHYS 102	4
& PHYS 191		& PHYS 192	
CHEM 101		4 BIOL 217	4
& CHEM 103		& BIOL 297	
MATH 285		4 LLRN 105	3

CMPT 102		3 PHIL 150		3
		18	17	
Junior				
Fall	Credits	Spring		Credits
PSYC 340		3 MATH 336		3
PHIL 201		3 BIOL 405 & BIOL 485		4
MATH 457		3 MUSC 150 or ART 150		3
HIST 150		3 RELS 2XX		3
FREE ELECTIVE		3 NEUR 460 (Computational Methods in Neuroscience)		3
		15	16	
Senior				
Fall	Credits	Spring		Credits
MODERN LANGUAGES		3 NEUR 490 (Senior Seminar & Capstone Project)		3
RELS 3XX		3 MODERN LANGUAGES		3
SOCIAL SCIENCES		3 FREE ELECTIVES		6
NEUR ELECTIVES		4		
		13	12	

Total Credits: 123

B.S. in Data Science

The Bachelor of Science in Data Science is an interdisciplinary major that brings together the expertise of the Kakos School of Arts and Sciences, the School of Engineering, and the O'Malley School of Business. By integrating mathematics, computing, business, and engineering, the program prepares students to thrive in a world increasingly driven by data and artificial intelligence.

Students develop a rigorous foundation in mathematics, statistics, programming, databases, and machine learning while learning to analyze complex data, build predictive models, design intelligent systems, and solve real-world problems. Through elective clusters, students can apply data science across diverse fields, including healthcare, finance, environmental science, engineering, business, and public policy.

The program culminates in a senior capstone project that integrates technical knowledge with domain expertise. Consistent with Manhattan University's mission, students also examine the ethical and societal implications of data and AI, graduating with the technical skills, critical thinking, and professional judgment needed to lead in a data-driven world.

Curriculum

Foundations for Data Science (21 Credits)

MATH 185	Calculus I	4
MATH 186	Calculus II	4
MATH 285	Calculus III	4

MATH 243	Foundations for Higher Mathematics	3
CMPT 101	Computer Science I	3
CMPT 102	Computer Science II	3
Data Science Core (24 Credits)		
MATH 331	Probability	3
MATH 336	Applied Statistics	3
MATH 372	Linear Algebra I	3
MATH 457	Machine Learning	3
CMPT 238	Data Structures and Algorithms - I	3
CMPT 258	Database Systems I	3
DTSC 311	(Computational Methods for Data Sci)	3
DTSC 490	(Data Science Capstone Project)	3
Data Science Electives (12 Credits)		
CMPT 363	Data Mining	3
or BUAN 410	Data Mining for Business Applications	
or EECE 478	Applied Data Mining for Engineers	
or MATH 456	Mathematical Modeling	
CMPT 465	Neural Networks and Learning Systems	3
or CMPT 485	Deep Learning & Generative AI	
BUAN 440	Big Data Analytics for Business Analytics	3
BUAN 405	Data Privacy	3
or EECE 403	Trustworthy AI Applications in Electrical & Computer Engineering	
Natural Sciences (9 Credits)		
SCI 100	Science Orientation Seminar I	1
BIOL 111	General Biology I	4
& BIOL 191	and General Biology I Lab	
or PHYS 101	Physics I	
& PHYS 191	and Physics I Lab	
or CHEM 101	General Chemistry I	
& CHEM 103	and General Chemistry Laboratory I	
BIOL 112	General Biology II	4
& BIOL 192	and General Biology II Lab	
or PHYS 102	Physics II	
& PHYS 192	and Physics II Lab	
or CHEM 102	General Chemistry II	
& CHEM 103	and General Chemistry Laboratory I	
Ethics (3 Credits)		
PHIL 201	Ethics	3
KSAS Core Curriculum (39 Credits)		39
Free Electives (15 Credits)		15

Plan of Study

Freshman

Fall	Credits	Spring	Credits
MATH 185		4 MATH 186	4
CMPT 101		3 CMPT 102	3
ENGL 110		3 ENGL 150	3
LLRN 105		3 RELS 110	3
SCI 100		1 Modern Languages II	3
Modern Languages I		3	
		17	16

Sophomore

Fall	Credits	Spring	Credits
MATH 243		3 MATH 336	3
MATH 285		4 MATH 372	3
CMPT 238		3 PHIL 201	3
PHIL 150		3 DTSC 311	3
Natural Sciences I		4 Natural Sciences II	4
		17	16

Junior

Fall	Credits	Spring	Credits
MATH 331		3 CMPT 258	3
MATH 457		3 Data Science Elective	3
Data Science Elective		3 Data Science Elective	3
Free Elective		3 MUSC 150 or ART 150	3
HIST 150		3 RELS 2XX	3
		15	15

Senior

Fall	Credits	Spring	Credits
Data Science Elective		3 Free Elective	3
RELS 3XX		3 Free Elective	3
Free Elective		3 Social Science	3
Free Elective		3 DTSC 490	3
Social Science		3	
		15	12

Total Credits: 123

B.S in Integrated Marketing Communication

The Integrated Marketing Communication (IMC) major brings together the strengths of the O'Malley School of Business and the Kakos School of Arts and Sciences in one interdisciplinary degree. Designed for students interested in the intersection of business, communication, creativity, and technology, the program prepares students to understand

audiences, build brands, create compelling content, and develop communication strategies across digital, social, and traditional media.

Students study both the strategic side of marketing and the creative side of communication, developing skills in consumer behavior, marketing strategy, persuasive communication, digital media, content creation, business analytics, and emerging technologies. The program combines the AACSB-accredited business core with coursework in communication and media, giving students the ability to connect creative ideas to broader organizational and business goals.

Students can further shape the major through one of two specialized tracks. The Content Creation track emphasizes multimedia storytelling, visual and audio production, social media content, and brand communication. The Artificial Intelligence in Marketing and Communication track focuses on analytics, AI-assisted strategy, data-driven marketing, predictive analysis, and emerging digital technologies.

The program culminates in an applied capstone experience in which students bring together marketing strategy, audience research, communication, media production, and analytics to develop and evaluate an integrated marketing communication campaign. Graduates are prepared for careers in areas such as marketing, advertising, public relations, brand strategy, social media, digital marketing, content creation, marketing analytics, and media strategy across industries ranging from business and technology to healthcare, entertainment, nonprofit organizations, and consumer brands.

Modified Liberal Arts Core (51 Credits)

ENGL 110	First Year Composition	3
RELS 110	Lasallian Seminar	3
RELS 200	Special Topic: in Religion	3
RELS 300	Special Topic	3
ECON 203	Microeconomics	3
ECON 204	Macroeconomics	3
Select Two:		6
PSYC 150	Roots: Psychology	
SOC 150	Roots: Sociology	
POSC 150	Roots: Government	
MATH 153	Finite Mathematics for Business Decisions	3
MATH 154	Calculus for Business Decisions	3
SCI XXX		3
LLRN 105	Interdisciplinary Liberal Arts Seminar	3
CIS 110	Introduction to Information Systems	3
ENGL 211	Business Communication	3
COMM 150	Roots: Communication	3
ART 145	Fundamentals of Art & Design	3
PHIL 150	Roots: Philosophy	3

Business Core (AACSB) (27 Credits)

ACCT 201	Principles of Accounting I	3
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ACCT 202	Principles of Accounting II	3
BUAN 227	Business Statistics	3
FIN 301	Principles of Business Finance	3
LAW 203	Business Law I	3
MKTG 201	Essentials of Marketing	3
MGMT 201	Introduction to Management	3
MGMT 307	Operations and Quality Management	3
MGMT 406	Strategic Management	3

Major Courses (45 Credits)

MKTG 303	Marketing Research	3
MKTG 307	Consumer Behavior	3
MKTG 412	International Marketing	3
MGKT 403		3
or COMM 320	Strategic Planning in Public Relations	
COMM 101	Introduction to Communication and Media	3
COMM 201	Ethics in Communication & Media	3
COMM 218	Introduction to Integrated Marketing Communications	3
COMM 304	Digital Storytelling	3
or COMM 305	Digital Print Design	
COMM 309	Digital Media Writing for Marketing Communications	3
MBA 645	Special Topics in Business	3
or COMM 412	Digital Marketing Communications	

Capstone (select one):

COMM 409	Senior Seminar	
MKTG 460		
INTERSHIP		

BUAN 167	AI Essentials for Business Applications	3
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Three electives (examples):

MKTG 421	Contemporary Marketing Issues	3
COMM 420	Advanced Public Relations	3
COMM 413	News Production for Social Media	3
COMM 414	Advertising Campaigns	3
MKTG 308	Sales Management	3
MKTG 305	Direct Response Marketing	3
MKTG 404	Advertising and Communication Management	3
MKTG 315	Retail Management	3

Tracks (Select three courses from one track) (9 Credits)

Track 1: Content Creation

ART 212	Art of Digital Photography	3
ART 213	Digital Drawing	3
ART 309	Animation	3

ART 380	Digital Video Art: Editing and Production	3
COMM 214	Magazine Writing	3
COMM 308	Studio Television Production	3
COMM 317	Audio Production	3
MUSC 390	Digital Audio Recording and Editing	3
MUSC 393	Audio Mixing & Music Prod	3
MUSC 395	Acoustics & Sound Control	3
Track 2: AI		
CIS 205 or BUAN 205	Introduction to Programming for Business Applications	3
CIS 211 or BUAN 211	System Administration and Cloud Computing for Business Applications	3
BUAN 410	Data Mining for Business Applications	3
BUAN 427	Artificial Intelligence and Machine Learning	3
CIS 431	Analysis, Design, and Implementation of Information Systems	3
Total 132 credits		

First Year

Fall	Credits	Spring	Credits
ENGL 110 or RELS 110		3 ENGL 110 or RELS 110	3
MATH 153		3 MATH 154	3
PSYC 150, SOC 150, or POSC 150		3 PSYC 150, SOC 150, or POSC 150	3
ART 145		3 COMM 150	3
COMM 101		3 MKTG 201	3
	15		15

Second Year

Fall	Credits	Spring	Credits
CIS 110		3 BUAN 227	3
ACCT 201		3 ACCT 202	3
ECON 203		3 ECON 204	3
COMM 201		3 COMM 218	3
RELS 200 or ENGL 150		3 MKTG 307	3
		RELS 200 or ENGL 150	3
	15		18

Third Year

Fall	Credits	Spring	Credits
MGMT 201		3 MGMT 307	3
LAW 203		3 FIN 301	3
BUAN 167		3 RELS 300	3
COMM 304		3 COMM 309	3

MKTG 303		3 MKTG 412		3
LLRN 105		3 LLRN 105 or PHIL 150		3
		18	18	
Fourth Year				
Fall	Credits	Spring		Credits
COMM 320 or MKTG 403		3 MBA 645 or COMM 412		3
SCI XXX		3 COMM 409, 460, or INTERNSHIP		3
MGMT 406		3 MAJOR ELECTIVE/ TRACK ELECTIVE		3
MAJOR ELECTIVE/ TRACK ELECTIVE		3 MAJOR ELECTIVE/ TRACK ELECTIVE		3
MAJOR ELECTIVE/ TRACK ELECTIVE		3 MAJOR ELECTIVE/ TRACK ELECTIVE		3
MAJOR ELECTIVE/ TRACK ELECTIVE		3		
		18	15	

Total Credits: 132

Artificial Intelligence Minor

AI has become a foundational technology affecting nearly all academic disciplines and professional fields. While all students routinely use AI-enabled tools, it should also be important to learn and understand AI fundamentals, including how such systems function, their limitations, and the ethical considerations surrounding their use. The Computer Science Department participates in this interdisciplinary minor.

The Minor in AI provides structured, interdisciplinary instruction in AI fundamentals to students from all majors. Its academic objective is to ensure that graduates possess a baseline understanding of AI concepts, design principles, and responsible application relevant to their fields of study.

The curriculum is designed to accommodate students with varied academic backgrounds. Thus, the curriculum explicitly recognizes that students enter the minor with varying levels of preparation. Multiple pathways are included to distinguish between students with prior coursework in programming and quantitative methods and those without such backgrounds.

Transfer Credit: At most one course transferred from another institution may be credited toward the credits required for a minor.

Application: You need to consult with the Chair of the respective Department in your school (the Computer Science Department for all KSAS students) and ask your academic adviser to assist you with a respective paperwork and adding minor to your Degree Works.

The minor consists of an AI core drawn from courses offered across the three participating schools, supplemented by prerequisite coursework where necessary. Students will complete either five or six courses, with a minimum of three drawn from the AI core.

Core Courses

Data Mining

CMPT 363	Data Mining	3
or BUAN 410	Data Mining for Business Applications	
or EECE 478	Applied Data Mining for Engineers	

Artificial Intelligence & Machine Learning

CMPT 420	Artificial Intelligence	3
or MATH 457	Machine Learning	
or BUAN 427	Artificial Intelligence and Machine Learning	
or EECE 471	Artificial Intelligence Applications in Electrical & Computer Engineering	
or MECH 442	Artificial Intelligence Applications in Mechanical Engineering	

Artificial Neural Networks

CMPT 465	Neural Networks and Learning Systems	3
or EECE 448	Applied Machine Learning for Electrical & Computer Engineering	

Others

CMPT 471	Parallel Computing	3
CMPT 485	Deep Learning & Generative AI	3
MATH 455	Operations Research	3
MATH 457	Machine Learning	3
EECE 403	Trustworthy AI Applications in Electrical & Computer Engineering	3
EECE 447	Image Processing & Pattern Recognition	3
EECE 483	Cognitive-AI Based Eng Design	3
EECE 494	Special Topics in Artificial Intelligence (AI) in Electrical and Computer Engineering	3
MECH 438	Operation Research	3
MECH 475	Data Driven Problem Solving in Mechanical Engineering	3
CHML 241	Data Analytics for Chemical Engineers	3

Tracks

1. Track for KSAS students (except CMPT, MATH, PHYS, and GAME) - 18 credits

CMPT 101	Computer Science I	3
CMPT 102	Computer Science II	3
CMPT 335	Discrete Structures (Three courses from the Core)	9
Three core courses (at least two from CMPT)		9

2. Track for Physics Majors - 15 credits

CMPT 102	Computer Science II	3
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CMPT 335	Discrete Structures	3
Three core courses (at least two from CMPT)		9
3. Track MATH majors- 15 credits		
CMPT 102	Computer Science II	3
Four core courses (at least 2 from CMPT)		12
4. Track for CMPT majors GAME concentrators - 15 credits		
Five core courses (3 must be CMPT)		15
Remark: To avoid double dipping, CMPT majors cannot count more than one CMPT course taken for the Minor in AI towards their Major.		
5. Track for OMSB majors (except CIS and BUAN) - 18 credits		
CIS 205	Introduction to Programming for Business Applications	3
CIS 310	Business Data and Information Management	3
CMPT 342	Python Programming	3
Three core courses (one must be CMPT)		9
6. Track for BUAN majors -15 credits		
BUAN 167	AI Essentials for Business Applications	3
CMPT 342	Python Programming	3
Three core courses (two must be CMPT)		9
7. Track for CIS majors -15 credits		
BUAN 167	AI Essentials for Business Applications	3
CMPT 342	Python Programming	3
Three core courses (one must be CMPT)		9
8. Track for students in the School of Engineering (except Electrical/Computer) -16 credits		
EECE 210	Applied Software Engineering I	3
EECE 300	Fundamentals of Electrical & Computer Engineering for Non-Engineering Programs	4
Three core core courses (one must be EECE)		9

Quality Science Minor

The Quality Science minor will expand opportunities for students who are interested in careers in the pharmaceutical and drug device industries. There is a great need in these industries to ensure that the medicines, dietary supplements, devices and other products meet quality and safety standards to build patient trust and improve global health. This minor will expose students to the practices and processes used by the industry to assure quality and safety.

The Quality Science minor is offered through a cooperative education model between industry partners and Manhattan University. The industry partners are organized into the *Pathway for Patient Health* non-profit consortium (<https://www.pathway4ph.org/>). Students who successfully complete this minor with a grade of at least 70% in each *Pathway* course and receive a passing grade on the courses taken through Manhattan University will also receive a Certified Quality Science Professional (CQSP) micro-

credential Students who earn grades of 95% or higher in all 3 *Pathway* courses, will receive their micro-credential with honors.

Pathway for Patient Health provides students enrolled in the minor with opportunities for mentoring and access to their hiring platform for internships and job opportunities. *Pathway* partners include Johnson and Johnson, Astra Zeneca, Baxter, Boston Scientific, Cook Medical, Illumina, Johnson and Johnson, Merck, Proctor and Gamble, Sanofi, Steris, Thermo-Fisher, the Wistar Institute and, many others pharmaceutical companies.

Job opportunities for students with the minor and CQSP micro-credential include:

- Quality Assurance Auditor
- Product Validation Manager
- FDA Inspection Manager
- Quality Control Laboratory Specialist

The 15-16 credit minor requires five courses: two in-person Manhattan University courses and three online, asynchronous courses developed by the *Pathway* Chief Quality Officer Team but offered as Manhattan University courses through Moodle.

Curriculum (15 or 16 credits):

Quality Science Core: asynchronous courses developed by the Pathway Chief Quality Officer Team but offered as Manhattan University courses through Moodle.

SCI 206	Global Regulatory & Legal Requirements of Quality	3
SCI 306	Risk & Failure Analysis	3
SCI 307	Product Development & Validation	3

Business Requirement - Select one of the following:

ACCT 201	Principles of Accounting I	3
or ECON 150	Roots: Economics	
or ECON 203	Microeconomics	
or ECON 204	Macroeconomics	
or CHML 461	Industrial Practice in Pharmaceutical Industry	

Laboratory Science Requirement - Select one of the following:

BIOL 111 & BIOL 191	General Biology I and General Biology I Lab	4 or 3
or BIOL 103 & BIOL 183	Introduction to Biology and Introduction to Biology Lab	
or BIOL 225 & BIOL 295	Microbiology and Microbiology Lab	
or CHEM 101 & CHEM 103	General Chemistry I and General Chemistry Laboratory I	
or PHYS 101 & PHYS 191	Physics I and Physics I Lab	

or SCI 203	Topics in Science I
or SCI 204	Topics in Science II

Sustainability Studies Minor

The Minor in Sustainability Studies is an interdisciplinary program offered across all three of Manhattan University's schools. It is designed to equip students with the knowledge and applied skills necessary to address complex environmental, economic, and social challenges. Drawing upon courses in environmental science, engineering, business, public health, economics, and public policy, the minor emphasizes systems thinking, ethical decision-making, and real-world problem solving.

Students complete a foundational course in environmental science and sustainability, disciplinary coursework within their home school, and interdisciplinary electives across schools. The program culminates in a capstone experience in which students work collaboratively to develop practical, evidence-based solutions to contemporary sustainability challenges, with particular attention to urban contexts and environmental justice.

This minor prepares students for careers and graduate study in fields including sustainable engineering, environmental policy, corporate sustainability, public health, environmental law, and urban planning.

Curriculum

ENSC 101	People, Planet & Sustainability	3
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Two courses from the student's home school:

OMSB:

ECON 332 & ECON 432	Introduction to Environmental Economics and Applied Environmental Economics	6
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SOE:

ENGS 204 & MECH 481	Environmental Engineering Principles I and Energy Management	6
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KSAS:

PHP 206 & POSC 223	Introduction to Public Health and Environmental Politics	6
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One course that is not offered by the student's home school. All courses are 3 credits

OMSB Options:

ECON 332 or ECON 432	Introduction to Environmental Economics Applied Environmental Economics	3
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SOE Options:

CEEN 307 or CEEN 308 or CEEN 309 or CEEN 314 or CEEN 401	Hydraulic Design Reliability Analysis in Civil and Environmental Engineering Environmental Law Water & Wastewater Treatment Processes Sustainable Water Resource Engineering	3
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or CEEN 402	Introduction to Geoenvironmental Engineering
or CEEN 450	Energy & the Environment
or ENGS 204	Environmental Engineering Principles I
or ENGS 478	Sustainability Engineering
or ENVL 408	Environmental Engineering Design
or MECH 481	Energy Management

KAKOS Options:

HIST 358	The Industrial Revolution	3
or PHP 206	Introduction to Public Health	
or PHP 418	Introduction to Environmental Health	
or POSC 223	Environmental Politics	
or POSC 251	Global Issues	
or INTL 201	Global Issues	
or POSC 367	Model United Nations	
or POSC 368	Model United Nations II	
or SOC 205	Urban Environments	
or SOC 225	Telling Stories with Maps	
or SOC 250	Introduction to GIS	
or SOC 334	Sustainable Development	
or SOC 353	Political Ecology	

Capstone

SUST 450	(Urban Sustainability Consulting Capstone)	3
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