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# Sustainable Science Management (BAS)

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The BAS in Sustainable Science Management (SSM) comprises a core curriculum in sustainability science, along with foundational sciences and liberal arts. Courses explore sustainability issues in energy, water, community, and others; analyzing the inter-relatedness of topics through systems thinking and dynamics models; monitoring progress through the use of sustainability indicators; and applying experience via internship and capstone.

The BAS degree is granted to students completing the prescribed four-year program. Only courses numbered 100 and above can be applied toward the degree. A tuition differential exists for upper division courses numbered 300 or higher. **See tuition and fees section of the catalog.**

## SSM Lower Division Requirements

Prior to enrolling in upper division (300+ level) SSM courses, students should first complete lower division requirements that may be accomplished in a number of ways.

### Lower division requirements (Students entering the SSM program as freshmen)

COURSE #	TITLE	CREDITS
SSM 101	Sustainability in a Changing World	3
	ICS 101 or BUSN 150 +	3
	CHEM 151/CHEM 151L or CHEM 161/CHEM 161L +	4
PSY 100	Survey of Psychology	3
ENG 100	Composition I	3
SSM 275	Basic Energy Production	3
	CHEM 162 and CHEM 162L, or GIS 150 +	4
	ECON 130 or ECON 131 +	3
MATH 115	Introduction to Statistics and Probability	3
	Foundations Global Elective - Either FGA or FGC +	3
	SSM 201, or OCN 201 and OCN 201L +	3 - 4
BIOL 171	General Biology I	3
BIOL 171L	General Biology I Lab	1
ACC 201	Introduction to Financial Accounting	3
	HWST 107 or HIST 284 +	3
MATH 135	Pre-Calculus: Elementary Functions	3
SSM 202	Sustainable Island Communities	3
	BLAW 200 or MATH 241 +	3
PSY/COM 253	Conflict Resolution & Mediation	3
ZOOL 200	Marine Biology	3
ZOOL 200L	Marine Biology Lab	1
<b>Sub-Total Credits</b>		<b>64-65</b>

## Transfer & Other Non-New Students

- All students**  
All students are required to meet the SSM lower division requirements in order to qualify for upper division coursework in the SSM program:
  - MATH 115 or MATH 115T; and MATH 135 or higher; both with grade C or better;
  - College chemistry with lab (minimum 4 credits) with grade C or better;
  - College biology with lab (minimum 4 credits) with grade C or better;
  - SSM 275 or equivalent with grade C or better.
  - SSM 101 and 202, both with grade C or better.
  - Minimum 62 credits in 100+ level coursework.  
*Note: Students should complete upper division SSM prerequisites early in their program.*
- UHMC degree graduates**  
Students who have graduated with a UHMC two-year degree in ASNS Natural Science, AA Liberal Arts, or AA Hawaiian Studies, and have applied as an SSM major, may take one SSM upper division course per semester (subject to pre-requisites) for up to three semesters, as long as enrolled in requirements of 1a-f coursework.
- Other degree graduates**  
Students holding a two or four year degree from an accredited institution must have: a) cumulative GPA of 2.5 or higher in their degree work, b) at least 40 hours of transferrable credit, and c) met the above 1a-g requirements of 1 in order to take upper division coursework in the SSM program
- Non-degree students** Students who have completed 62 or more credits of 100+ coursework at an accredited institution may take SSM upper division coursework. To qualify for upper division SSM courses students shall have a) substantially met the SSM lower division requirements set forth in the SSM Program Map, b) achieved grade C or better in all SSM program requirements with a cumulative 2.5 GPA on all transferring credits, and c) met all requirements of paragraph 1a-f.

## SSM Graduation Requirements

- Students must complete the following in order to graduate with a BAS degree in Sustainability Science Management:
- Meet all lower division requirements in the SSM Program Map or in paragraph 1a-f.
  - Complete all required upper division coursework on the SSM Program Map, with grade C or better in each required course and with a cumulative GPA of 2.5 for all SSM program requirements. Upper division electives may be any SSM upper division course, or other 300-level or higher course as approved by the program coordinator. Not less than 6 credits of upper division elective credits must be 400+ level courses.
  - A minimum of 30 credits shall be taken at UHMC.
  - Complete six credits of capstone courses (SSM 495-SSM 496) over not less than two semesters with grade C or better.
  - Complete not less than 15 credits of writing intensive (WI) courses with grade C or better and at least 6 credits shall be in courses of 300-level or higher.
  - All SSM alpha required courses (except for SSM 392V) must be taken for a letter grade. A maximum of 6 credits in other coursework may be achieved via Prior Learning Assessment.
  - Complete not less than 124 credit hours of coursework in support of the BAS degree. Only courses numbered 100 and above may apply to this degree requirement.
  - Submission of a completed Application for Graduation from UHMC.

## Upper division requirements for SSM Bachelor of Applied Science (BAS) Degree

COURSE #	TITLE	CREDITS
SSM 301	Sustainable Assessments and Indicators	3
SSM 302	Environmental Health	3
SSM 375	Renewable Energy Conversions and Processes	3
SSM 384	Sustaining the Globalized Ocean	3
SSM 392v	Sustainable Science Management Internship	1 - 3
SSM 401	Environmental Law, Policy, and Justice	3
SSM 402	Water Resources Management	3
SSM 403	Renewable Energy Integration	3
SSM 422	Sustainable Systems Thinking	3
SSM 495	SSM Capstone I	3
SSM 496	SSM Capstone II	3
MGT 310	Principles of Management	3
PHIL 323	Professional Ethics	3
BIOL 331	Marine Mammal Biology	3
BIOL 331L	Marine Mammal Biology Lab	1
BIOL 424	Protected Species Management	2
BIOL 424L	Protected Species Management Lab	1
HUM 400	Changes & Choices	3
COM 459	Intercultural Communication II	3
ENG 316	Advanced Research Writing	3
	Upper Division Program Elective +	3
	Upper Division Program Elective +	3
	Upper Division Program Elective +	3
<b>Sub-Total Credits</b>		<b>60</b>
<b>Total credits:</b>		<b>124</b>

## Course Sequencing

Full-time lower division students would take this sequence:

### First Semester (Fall)

COURSE #	TITLE	CREDITS
SSM 101	Sustainability in a Changing World	3
	ICS 101 or BUSN 150 +	3
	CHEM 151/CHEM 151L or CHEM 161/CHEM 161L +	4
PSY 100	Survey of Psychology	3
ENG 100	Composition I	3
<b>Sub-Total Credits</b>		<b>16</b>

### Second Semester (Spring)

COURSE #	TITLE	CREDITS
SSM 275	Basic Energy Production	3
	CHEM 162 and CHEM 162L, or GIS 150 +	4
	ECON 130 or ECON 131 +	3
MATH 135	Pre-Calculus: Elementary Functions	3
	Foundations Global Elective - Either FGA or FGC +	3
<b>Sub-Total Credits</b>		<b>16</b>

### Third Semester (Fall)

COURSE #	TITLE	CREDITS
	SSM 201, or OCN 201 and OCN 201L +	3 - 4
BIOL 171	General Biology I	3
BIOL 171L	General Biology I Lab	1
ACC 201	Introduction to Financial Accounting	3
	HWST 107 or HIST 284 +	3
	MATH 115 or MATH 115T +	3 - 4
<b>Sub-Total Credits</b>		<b>16-18</b>

### Fourth Semester (Spring)

COURSE #	TITLE	CREDITS
SSM 202	Sustainable Island Communities	3
	BLAW 200 or MATH 241 +	3
COM/PSY 215	Conflict Resolution & Mediation	3
ZOOL 200	Marine Biology	3
ZOOL 200L	Marine Biology Lab	1
	ENG 200 or ENG 225 +	3
<b>Sub-Total Credits</b>		<b>16</b>

Full-time upper division students would take courses in this sequence:

### Junior Year (Fall)

COURSE #	TITLE	CREDITS
SSM 302	Environmental Health	3
SSM 375	Renewable Energy Conversions and Processes	3
	Upper Division Program Elective +	3
	MGT 310 or MGT 322 +	3
ENG 316	Advanced Research Writing	3
<b>Sub-Total Credits</b>		<b>15</b>

### Junior Year (Spring)

COURSE #	TITLE	CREDITS
SSM 301	Sustainable Assessments and Indicators	3
SSM 392v	Sustainable Science Management Internship	1 - 3
SSM 402	Water Resources Management	3
PHIL 323	Professional Ethics	3
BIOL 331	Marine Mammal Biology	3
BIOL 331L	Marine Mammal Biology Lab	1
<b>Sub-Total Credits</b>		<b>15</b>

### Senior Year (Fall)

COURSE #	TITLE	CREDITS
SSM 422	Sustainable Systems Thinking	3
SSM 495	SSM Capstone I	3
HUM 400	Changes & Choices	3
	SSM 384	Sustaining the Globalized Ocean
	SSM 403 or BIOL 424 +	3
<b>Sub-Total Credits</b>		<b>15</b>

### Senior Year (Spring)

Calculus is a prerequisite for SSM 403 and other upper level courses.

COURSE #	TITLE	CREDITS
SSM 401	Environmental Law, Policy, and Justice	3
	Upper Division Program Elective +	3
SSM 496	SSM Capstone II	3
	Upper Division Program Elective +	3
COM 459	Intercultural Communication II	3
<b>Sub-Total Credits</b>		<b>15</b>