

## B.S. Sustainable Bioproducts – Circular Economy

*This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.*

### First Year

#### Fall

Course	Prerequisite	Credit
FW1050 – Natural Resource Professional ( <i>Essential Education: Seminar</i> )		2
BL1400 – Principles of Biology ( <i>Essential Education: Science</i> )		3
BL1410 – Principles of Biology lab		1
MA1135 – Calculus for Life Sciences ( <i>Essential Education: Math</i> )	MA1031 or MA1032 or placement	4
UN1015 – Composition ( <i>Essential Education</i> )		3
<b>Total</b>		<b>13</b>

#### Spring

Course	Prerequisite	Credit
BUS1100 – Intro to Business		3
CH1150 – University Chemistry I ( <i>Essential Education: STEM</i> )	MA1031 or higher or placement	3
CH1151 – University Chemistry I lab	CH1150 (C)	1
EC2001 – Principles of Economics	MA1135	3
<i>Essential Education: Foundations of the Human World</i>		3
<i>Essential Education: Activities</i>		1
<b>Total</b>		<b>14</b>

### Second Year

#### Fall

Course	Prerequisite	Credit
FW2030 – Conservation of Nature		2
MA2720 – Statistical Methods	MA1030 or higher or placement	4
PH1110 – College Physics I	MA1031 or higher or placement	3
PH1111 – College Physics I lab	PH1110 (C)	1
<i>Essential Education: SHAPE</i>		3
<i>Essential Education: Activities</i>		1
<b>Total</b>		<b>14</b>

#### Spring

Course	Prerequisite	Credit
FW1035 – Wood Anatomy		3
FW2081 – Intro to Circular Economy		3
Free Elective		3
<i>Essential Education: Arts &amp; Culture</i>		3
<i>Essential Education: Communication Intensive</i>		3
<i>Essential Education: Activities</i>		1
<b>Total</b>		<b>16</b>

### Third Year

#### Fall

Course	Prerequisite	Credit
FW3090 – Mechanics of Wood Materials		3
FW3097 – Forest Biomaterials		3
EC3300 – Industrial Organization		3
ENT3950 – Enterprise		1
Engineering/Business Elective		3
Fine Art Elective		3
<b>Total</b>		<b>16</b>

#### Spring

Course	Prerequisite	Credit
ENT3960 – Enterprise		1
MKT3000 – Principles of Marketing		3
Engineering/Business Elective		3
Free Elective		3
<i>Essential Education: Experience</i>		3
<i>Essential Education: Intercultural Competency</i>		3
<b>Total</b>		<b>16</b>

### Fourth Year

#### Fall

Course	Prerequisite	Credit
FW3098 – Adding Value to Forest Biomaterials		2
FW4050 – Deterioration & Preservation of Biomaterials		3
ENG4515 – Sustainability & Resilience		3
ENT4900 – Senior Enterprise		2
SS4313 – Sustainability Science		3
Free Elective		3
<b>Total</b>		<b>16</b>

#### Spring

Course	Prerequisite	Credit
ENT4910 – Senior Enterprise		2
HU3120 – Technical & Professional Communication		3
OSM3000 – Operations & Supply Chain Mgmt		3
Internship Experience		2-4
Free Elective		3-5
<b>Total</b>		<b>15</b>

**Grand Total = 120 Credits**

Fine Arts Elective (choose one)		
Course #	Course Title & Credits	Semester Offered / Prerequisites
ART1110	Art + Design Studio (3)	Fall
ART2110	Art on Site (3)	On Demand
ART2160	Art of Mindful Daily Wonder (3)	On Demand
ART2190	Art, Nature, & Contemplative Photography	Fall, Summer

Engineering/Business Elective (choose 6 credits)		
Course #	Course Title & Credits	Semester Offered / Prerequisites
CM3979	Alternative Energy (1)	Fall / CH1150 & MA1135
CMG4800	Sustainable Construction (3)	Spring
MEEM4685	Env Responsibility Design & Manufacturing (3)	Spring – odd yrs
MGT2000	Team Dynamics (3)	Fall, Spring
MGT3800	Entrepreneurship (3)	Fall, Spring
MSE4777	Distribution Additive Manufacturing (3)	Fall
Any ENT course not already required	Varies	Varies

Internship Experience (choose 2-4 credits)		
Course #	Course Title & Credits	Semester Offered / Prerequisites
FW4000 (must repeat for at least 2 credits total)	Professional Experience (1)	Must have an approved internship before enrolling; permission of instructor required
FW4840	Senior Research Thesis (4)	Permission of instructor required; Must be senior status
UN3002	Undergraduate Cooperative Education 1 (2)	Departmental permission required
Varies	Study Abroad (varies)	Requires prior approval from director

**NOTE:**

**Prerequisite courses:**

- The prerequisite course must be successfully completed PRIOR to taking the subsequent course. Concurrent Prerequisites ~ (C) ~ may be taken at the same time, although it is not necessary if the prerequisite course is completed first. Required Corequisite courses that MUST be taken together in the same semester. See your academic advisor for questions.

**Essential Education Requirements:**

- 24 total credits. Required courses are UN1015-Composition (3 credits), a Foundations in the Human World course (3 credits), a Communication Intensive course (3 credits), an Arts & Culture course (3 credits), an Intercultural Competency (3000+) course (3 credits), a SHAPE course (3 credits), an Essential Education Experience (3000+) course (3 credits), and 3 credits of Activities for Wellbeing and Success. Activities for Well-being and Success: Mainly physical education courses with some additions. Three credits are required for graduation. These credits will be included as earned hours and may be used to determine full-time enrollment status.

**Enterprise:**

- Students must participate in a minimum of four semesters of an Enterprise project and complete the course sequence including ENT3950, ENT3960, ENT4900, and ENT4910. See your academic advisor for questions.

**Internship Experience:**

- Students must participate in a professional experience such as an internship, cooperative education experience, study away experience, and/or a senior research thesis. See your academic advisor or program director for questions.