# SUSTAINABLE RESIDENTIAL STRUCTURES MAJOR OPTION

## **Program Curriculum**

Minimum credit hours required for graduation is 120.

Code	Title	Credits	
Degree Core Requirements (24 credit hours)			
SBIO 1024	Systems Thinking in a Bioeconomy	3	
SBIO 1114	A Sustainable Future through Circular Economy	/ 3	
SBIO 2124	Structure and Properties of Sustainable Biomaterials	3	
SBIO 3454	Society, Sustainability Biomaterials and Energy	3	
SBIO 3524	Manufacture of Sustainable Biomaterials for Structures	3	
SBIO 4164	Sustainability Performance and Assessments	3	
STAT 3615	Biological Statistics	3	
STAT 3616	Biological Statistics	3	
Subtotal		24	
Sustainable Resid	dential Structures Option Required Courses (28		
credit hours)			
CHEM 1036	General Chemistry	3	
PHYS 2205	General Physics	3	
RED 1604	Introduction to Residential Design	3	
SBIO 2314	Building Information Modeling for Wood-Based Construction	3	
SBIO 3004	Sustainable Nature-Based Enterprises	3	
SBIO 3314	Mechanics of Sustainable Biomaterials and Packaging	4	
SBIO 3324	Green Building Systems	3	
SBIO 4314	Design of Wood Structures	3	
SBIO 4714	Performance of Sustainable Biomaterials in Buildings	3	
Subtotal		28	
<b>Restricted Electiv</b>	es (3 credit hours)		
Select one of the following: 3			
SBIO 2614	Introduction to Forest Products Marketing		
SBIO 3464	Sustainable Operations Management		
Subtotal		3	
Additional Course	e Requirements (3 credit hours)		
Select one of the	following:	3	
SBIO 3445	Entrepreneurial Wood Design and Innovation		
SBIO 3446	Entrepreneurial Wood Design and Innovation		
SBIO 3954	Study Abroad		
SBIO 3964	Field Study		
SBIO 2994	Undergraduate Research		
SBIO 3994	Undergraduate Research		
SBIO 4994	Undergraduate Research		
Subtotal		3	
Free Electives (16 credit hours)			
Select sixteen (16	i) credit hours	16	
Subtotal		16	

Pathways to Gene	ral Education Requirements (46 credit hours)		
Pathways Concep	t 1 - Discourse		
ENGL 1105	First-Year Writing	3	
or COMM 1015	Communication Skills		
ENGL 1106	First-Year Writing	3	
or COMM 1016	Communication Skills		
Select three (3) cr	edit hours in Pathway 1a (https://catalog.vt.edu/	3	
Pathways Concept 2 - Critical Thinking in the Humanities			
Select six (6) credit hours in Pathway 2 (https://catalog.vt.edu/			
Pathways Concent	2 - Reasoning in the Social Sciences		
	Principles of Economics	3	
ECON 2005	Principles of Economics	3	
Pathwaya Concent	A - Reasoning in the Natural Sciences	J	
	Principles of Riology	2	
CHEM 1025	Concral Chemistry	ა ა	
	Concred Chemistry Loboratory	1	
Dathwaya Canaant	5. Quantitative and Computational Thinking		
		2	
		3	
	Circular Economy Analytics for Sustainable	3	
SBI0 2504	Systems (5A)	3	
Pathways Concept	6 - Critique and Practice in Design and the Arts		
Select three (3) credit hours in Pathway 6d (https://catalog.vt.edu/ course-search/?attrs_pathways=attrs_pathways_G06D) or Integrated course from the approved list			
Select three (3) credit hours in Pathway 6a (https://catalog.vt.edu/ course-search/?attrs_pathways=attrs_pathways_G06A) or Integrated course from the approved list			
Pathways Concept United States	7 - Critical Analysis of Identity and Equity in the		
Select three (3) credit hours in Pathway 7 (https://catalog.vt.edu/ course-search/?attrs_pathways=attrs_pathways_G07) that may be double-counted with another core outcome or major requirement			
Subtotal		46	
Total Credits		120	

## **Satisfactory Progress**

By the end of the semester in which the student has attempted 60 hours (including transfer, advanced placement, advanced standing, and credit by examination), "satisfactory progress" towards a B.S. degree in the College of Natural Resources and Environment will include the following minimum criteria:

- · Having a grade point average of at least 2.0
- Passing at least 24 semester credits that apply to Pathways for General Education
- Passing the required 1000-level courses in Biology, Chemistry, English, and Math

## **Graduation Requirements**

#### **In-major GPA Computation**

Includes all courses designated SBIO. The acceptable cumulative minimum is 2.0

### Sequencing

Courses should be taken in a sequence that ensures that prerequisite or co-requisite requirements are met. Free elective courses may also have prerequisite requirements. Students should plan ahead and ensure that they have completed prerequisites or are enrolled in co-requisite courses. Some courses required for this major have prerequisites. Please refer to Undergraduate Course Catalog or consult your advisor for information about prerequisite requirements.

### **Foreign Language Requirement**

2 years of one language in high school or an 1105-1106 foreign language (e.g., FR, GR, SPAN) grouping if less than two years of one language in high school.