FOREST RENEWABLE MATERIALS/SCIENCE AND ENGINEERING, ASSOCIATE OF SCIENCE

Renewable Materials is a multidisciplinary program that prepares students to work with renewable, plant-based materials to solve challenging world problems. Renewable materials such as wood, bamboo, canes, and agricultural fibers are examined to understand their characteristics and how to make useful products. Students gain broad perspectives on current issues associated with the sustainable utilization of renewable materials, including global trade, business innovation, energy production, and environmental impacts.

The science and engineering option focuses on science, technology and engineering when it comes to working with wood products. Students gain a strong understanding of where wood products come from, and test renewable materials to determine how we can use them in new and innovative ways. Students learn in woodshops, labs and even test materials in our climate rooms and earthquake testing room.

Check out the Forestry/Natural Resources (https://www.socc.edu/forestry) program website!

The forestry field is projected to have many career opportunities coming up in the next decade as many forestry and natural resources professionals retire in the next few years. Students who enjoy working outdoors and want to have a career that focuses on managing our valuable forest lands to conserve and protect resources as well as produce valuable products for society should consider this degree.

Graduation Requirements

Students must complete a minimum of 94 credit hours with a cumulative Grade Point Average (GPA) of 2.0 or better. All courses must be completed with a grade of 'C' or better. Twenty-four (24) credits must be completed at Southwestern before the AS degree is awarded.

Courses that are developmental in nature, (designed to prepare students for college transfer courses), are not applicable to this degree.

Complete the graduation application process one term prior to the term of completion (e.g., spring term graduates must apply during winter term).

Pre-Program Courses

Students are required to take the following courses *prior to* the program courses, depending on students' college placement information. See advisor for details:

Code	Title	Credits
CIS90	Computer Basics (or demonstrate proficiency)	2
MTH95	Intermediate Algebra (or placement in higher math course)	4
WR90R	Academic Literacy (or placement in higher writing course)	4

Program Guide

Course	Title	Credits
First Year		
Fall		
BA211	Principles of Accounting I	4
CHEM221	General Chemistry I	5
F111	Introduction to Forestry	4
WR121	English Composition	3
ENGR211	Statics	3
	Credits	19
Winter		
CHEM222	General Chemistry II	5
CIS125S	Spreadsheet Applications	3
F250	Forest Biology	4
Specific Elective [1]		3
	Credits	15
Spring		
SP111	Fundamentals of Public Speaking	3
WR227	Report Writing	3
PE231	Wellness for Life	3
CHEM223	General Chemistry III	5
Specific Elective [2]		3
	Credits	17
Second Year		
Fall		
BA230	Business Law	4
ECON201	Microeconomics	4
MTH251	Calculus I Differential Calculus	4
PH201 or PH211	Gen Physics I: Mechanics or General Physics w/Calculus I	5
	Credits	17
Winter		
ECON202	Macroeconomics	4
MTH252	Calculus II Integral Calculus	4
PH202 or PH212	General Physics II: Heat, Waves, Relativity or General Physics w/Calculus II	5
	Credits	13
Spring		
BA213	Principles of Accounting III Managerial Accounting	4
MTH254	Vector Calculus I	4
PH203 or PH213	General Physics III: Electricity and Magnetism or General Physics w/Calculus III	5
Specific Elective [2]		3
	Credits	16
	Total Credits	97

Footnotes

[1] Literature and Arts - Specific Elective options: ENG104 Introduction to Literature Fiction, ENG105 Introduction to Literature Drama, ENG106 Introduction to Literature Poetry, ENG107 World Literature, ENG107H World Literature w/Honors, ENG108 World Literature, ENG201 Shakespeare, ENG204 Survey of English Literature, ENG205 Survey of English Literature, ENG206 Survey of English Literature, MUS201 Intro to Music and its Literature, ART101 Art Appreciation, ART204 History of Western Art: Introduction to Art History, ART205 History of Western Art: Introduction to Art History, or ART206 History of Western Art: Introduction to Art History.

[2] Western Culture - Specific Elective options: PHL102 Ethics, MUS201 Intro to Music and its Literature, ENG201 Shakespeare, ENG204 Survey of English Literature, ENG205 Survey of English Literature, ENG206 Survey of English Literature, ART204 History of Western Art: Introduction to Art History, ART205 History of Western Art: Introduction to Art History, or ART206 History of Western Art: Introduction to Art History.

Program Student Learning Outcomes

Upon successful completion of this program, the student will be able to:

- Demonstrate fundamental knowledge of wood and similar renewable materials that make them challenging to utilize as industrial and building materials.
- Demonstrate command of renewable material moisture content and specific gravity calculations.
- Demonstrate ability to find, compile, analyze, and communicate technical communication.
- Demonstrate familiarity with the diverse complexity of the Renewable Materials industry, and the challenges it faces with balancing business and environmental goals.
- Demonstrate a combination of technical and business acumen that allows effective management of process and people.
- Demonstrate ability to creatively self-direct learning outcomes within the classroom environment and/or through independent undergraduate research.
- Gain information and knowledge to become a better global citizen.