

# WOOD INNOVATION FOR SUSTAINABILITY: SCIENCE AND ENGINEERING, ASSOCIATE OF SCIENCE

Wood Innovation 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.

This degree was designed to transfer to Oregon State University's College of Forestry. Other transfer options may be available, consult your advisor for details. Check out the Forestry/Natural Resources 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 93 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 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).

## PROGRAM STUDENT LEARNING OUTCOMES

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

- Demonstrate ability to find, compile, analyze, and communicate technical information.
- Demonstrate basic skills in engineering, forest biology, chemistry, business acumen, physics, and spreadsheet applications.
- Demonstrate basic understanding of complexity between renewable materials, business, and environmentalism.

Math and writing placement are unique to each student and are determined during the admissions and intake advising process. Additional math or writing courses may be required prior to taking the math or writing program requirements in this degree.

Code	Title	Credits
MTH251	Calculus I Differential Calculus	4
MTH252	Calculus II Integral Calculus	4
BA211Z	Principles of Financial Accounting	4

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
CHEM221	General Chemistry I	5
ENGR111 or ENGR211	Intro to Engineering or Statics	3
F111	Introduction to Forestry <sup>5</sup>	3
WR121Z	Composition I	4
Literature and the Arts <sup>1</sup>		3

**Credits 18**

<b>Winter</b>		
CHEM222	General Chemistry II	5
CIS125S	Spreadsheet Applications	3
F250	Forest Biology	4
BA212	Principles of Accounting II	4

**Credits 16**

<b>Spring</b>		
CHEM223	General Chemistry III	5
BA213Z	Principles of Managerial Accounting	4
COMM111Z	Public Speaking	4
PE231	Wellness for Life	3
WR227Z	Technical Writing	4

**Credits 20**

<b>Second Year</b>		
<b>Fall</b>		
BA230	Business Law	4
ECON201	Microeconomics	4
PH201 or PH211	General Physics I: Mechanics or General Physics with Calculus I	5

**Credits 13**

<b>Winter</b>		
ECON202	Macroeconomics	4
PH202 or PH212	General Physics II: Heat, Waves, Relativity or General Physics with Calculus II	5
Cultural Diversity <sup>3</sup>		3

**Credits 12**

<b>Spring</b>		
MTH254	Vector Calculus I <sup>6</sup>	4
PH203 or PH213	Gen Physics III: Elect & Magnetism or General Physics with Calculus III	5
Western Culture <sup>4</sup>		3

Difference, Power, and Discrimination <sup>2</sup>	3
<b>Credits</b>	<b>15</b>
<b>Total Credits</b>	<b>94</b>

<sup>1</sup> Literature and the Arts: ART204, ART205, ART206, ENG104Z, ENG105Z, ENG106Z, ENG107, ENG108, ENG109, ENG201, ENG204, ENG205, ENG206, ENG262, MUS201, MUS202, MUS203.

<sup>2</sup> Difference, Power, and Discrimination: HST201, HST202, HST203, SOC206 , SOC213

<sup>3</sup> Cultural Diversity: ANTH224, ANTH230, ANTH231, ANTH232, HST104, HUM204, HUM205, HUM206

<sup>4</sup> Western Culture: ART204, ART205, ART206, ENG107, ENG108, ENG109, ENG201, ENG204, ENG205, ENG206, HST101, HST102, HST103, HST201, HST202, HST203, MUS201, MUS202, MUS203, PHL101, PHL102.

<sup>5</sup> NR201 may be substituted for F111.

<sup>6</sup> MTH254 or higher will satisfy this requirement.