

RENEWABLE MATERIALS UNDERGRADUATE MAJOR (BS, HBS)

This major offers the following option(s):

- Advanced Wood Manufacturing (<http://catalog.oregonstate.edu/college-departments/forestry/wood-science-engineering/renewable-materials-bs-hbs/advanced-wood-manufacturing-option/>)
- Art and Design (<http://catalog.oregonstate.edu/college-departments/forestry/wood-science-engineering/renewable-materials-bs-hbs/art-design-option/>)
- Management and Marketing (<http://catalog.oregonstate.edu/college-departments/forestry/wood-science-engineering/renewable-materials-bs-hbs/management-marketing-option/>)
- Science and Engineering (<http://catalog.oregonstate.edu/college-departments/forestry/wood-science-engineering/renewable-materials-bs-hbs/science-engineering-option/>)

The Bachelor of Science degree in Renewable Materials program is a multidisciplinary professional 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.

Graduates with degrees in renewable materials are highly sought after to work in business, manufacturing operations, and technical support where they use their knowledge and expertise to help develop sustainable products, industrial systems, and economies.

The curriculum includes a lower-division core in science and math with a choice of one of the **required** upper-division options in Advanced Wood Manufacturing (AWD), Art and Design (A&D), Management and Marketing (M&M), or Science and Engineering (S&E).

- The AWD option develops students' knowledge of smart manufacturing and its application in renewable materials industries.
- The A&D option prepares students to engage with renewable materials on an aesthetic level. Artistically-oriented students learn how materials function within the human space and gain an understanding of green buildings and architecture.
- The M&M option is designed for students interested in business. Completion of the M&M option and meeting additional grade requirements of the College of Business will fulfill the requirements for a transcript-visible Business and Entrepreneurship minor.
- The S&E option is a flexible program that allows technically oriented students to design a personalized curriculum that opens doors to jobs that solve complex problems or to graduate school. Students select courses (often minors) that complement their interests.

In addition to the course work, all students must have six months of work experience in an area related to their major. This is usually accomplished by two summers of employment in business or industry, but it may include work during the academic year. The department has an

established network of connections to help place students in internships and summer employment.

Major Code: 238

- 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 information.
- Gain 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.
- Gain information and knowledge to become a better global citizen.

Code	Title	Credits
Baccalaureate Core ¹		
Select 51 credits		51
<i>Fitness</i>		
HHS 231	*LIFETIME FITNESS FOR HEALTH	
HHS 241	*LIFETIME FITNESS (or any PAC course)	
<i>Writing I</i>		
WR 121	*ENGLISH COMPOSITION	
<i>Writing II</i>		
WR 214	*WRITING IN BUSINESS	
or WR 327	*TECHNICAL WRITING	
<i>Speech</i>		
COMM 111	*PUBLIC SPEAKING	
or COMM 114	*ARGUMENT AND CRITICAL DISCOURSE	
Renewable Materials Core Curriculum		
CH 121	GENERAL CHEMISTRY	5
CH 122	*GENERAL CHEMISTRY	5
FES 240	*FOREST BIOLOGY	4
FOR 111	INTRODUCTION TO FORESTRY	3
FOR 112	COMPUTING APPLICATIONS IN FORESTRY	3
WSE 111	RENEWABLE MATERIALS FOR A GREEN PLANET	2
WSE 210	RENEWABLE MATERIALS TECHNOLOGY AND UTILIZATION	4
WSE 225	DEVELOPMENTS OF BUILDING DESIGN WITH RENEWABLE MATERIALS	3
WSE 250	CAD: COMPUTER AIDED DESIGN	3
WSE 320	ANATOMY OF RENEWABLE MATERIALS	3
WSE 321	CHEMISTRY OF RENEWABLE MATERIALS	3
WSE 322	PHYSICAL AND MECHANICAL PROPERTIES OF RENEWABLE MATERIALS	4
WSE 324	RENEWABLE MATERIALS LABORATORY	3
WSE 453	*FOREST PRODUCTS BUSINESS	3
WSE 465	RENEWABLE MATERIALS MANUFACTURING EXPERIENCE	2
Total credits required for graduation		180

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Required to fulfill Renewable Materials Core Requirements. These courses must be taken for grades (not S/U).

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Baccalaureate Core Course (BCC)

2 Renewable Materials Undergraduate Major (BS, HBS)

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Writing Intensive Course (WIC)

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