

**Sustainable Materials Science and Technology Option  
Coursework Requirements - 2013-2014 Catalog  
29 Total Credits**

**Required Courses**

FOR 280	Wood Properties and Identification	4 cr
FOR 480*	Wood Anatomy and Fiber Analysis	3 cr
FOR 481*	Conversion of Lignocellulosic Materials	3 cr
FOR 483*	Wood Deterioration and Preservation	3 cr
FOR 485*	Wood and Natural Fiber Composites	3 cr
FOR 486*	Drying Processes for Wood & Lignocellulosic Materials	3 cr
FOR 487*	Physical Properties of Wood	4 cr
MATH 151/181	Calculus Elective	3 or 4 cr
NREM 104	Practical experience requirement	R

**26 credits**

**Restricted Elective**

TSM 270	Principles of Injury Prevention	3 cr
TSM 310	Total Quality Improvement	3 cr

**Select three credits from the following list:**

\* Courses offered only in alternate years:

- FOR 480 offered Fall 2013
- FOR 481 offered Fall 2014
- FOR 483 offered Fall 2013
- FOR 485 offered Fall 2014
- FOR 486 offered Spring 2014
- FOR 487 offered Spring 2014

For subsequent offerings, see the ISU "Schedule of Classes" web page.

**Suggested Sequence of Courses**  
**Sustainable Materials Science and Technology Option\***

**Freshman Year**

Biol 211	Principles of Biology	3	Math 150	Math for Social Science	3
Biol 211L	Prin. of Biology Lab.	1	Chem 163	General Chemistry	4
NREM 110	Orientation in NREM	1	Chem 163L	General Chemistry Lab	1
Engl 150	Critical Thinking & Comm	3	Stat 101	Intro to Statistics	4
Math 140	College Algebra**	3	Lib 160	Library Instruction	1
NREM 120	Intro. Renew Resources	3	Required Elective		<u>3</u>
Soc130/134	Sociology Elective	<u>3</u>			<u>16</u>
		17			

**Sophomore Year**

For 201	Forest Biology	2	Agron 154	Fund. of Soil Science	3
For 202	Wood Utilization	2	Engl 250	W/O/V/E/ Communication	3
For 203	Resource Meas/Eval	2	For 280	Wood Prop & ID	4
For 204	Ecosys. Decision-Making	2	NREM 211	Careers in Nat. Res.	1
For 205	Integrated Forestry Lab	3	Free Elective		<u>6</u>
For 206	Fall Forestry Camp	<u>4</u>			<u>17</u>
		15			

**Junior Year\*\*\***

Math 151/181	Calculus Elective	3 or 4	For 302	Silviculture	3
Sp Cm 212	Fund. of Public Speaking	3	For 451	For. Econ./Quant. Methods	4
Free Elective		3	Free Elective		3
<b>Choose:</b>			<b>Choose:</b>		
For 480	Wood Anatomy & Fiber	3	For 486	Drying Processes for Wood	3
For 483	Wood Deterioration & Pres.	3	For 487	Phy. Properties of Wood	4
<b>Or:</b>			<b>Or:</b>		
For 481	Conversion of Ligno Matls.	3	Required Elective		3
For 485	Wood & Nat Fiber Composites	<u>3</u>	Free Elective		<u>3</u>
		15 - 16			<u>16-17</u>

**Senior Year\*\*\***

Communication Elective		3	For 454	For. Practicum	3
Required Elective		6	Free Electives		6
Restricted Elective		3	<b>Choose:</b>		
<b>Choose:</b>			For 486	Drying Processes for Wood	3
For 480	Wood Anatomy & Fiber	3	For 487	Phy. Properties of Wood	4
For 483	Wood Deterioration & Pres.	3	<b>Or:</b>		
<b>Or:</b>			Required Elective		3
For 481	Conversion of Ligno Matls.	3	Free Elective (as needed)		<u>3</u>
For 485	Wood & Nat Fiber Composites	<u>3</u>			<u>15-16</u>
		18			

\* To complete degree program in 4 years students must maintain an average of 16 credits per semester.

\*\* Initial math course is determined on the basis of high school math and placement test scores. A non-credit math course (Math 10) may be required at additional cost.

\*\*\* In scheduling coursework, students should pay particular attention to courses with limited offerings (e.g., offered only on alternate years) and to course sequences (i.e., where a course serves as a prerequisite for another course).

Note: In addition to coursework listed above, students must complete departmental requirements for Practical Work Experience requirement (NREM 104). See <http://www.nrem.iastate.edu/workexperience> for details.