ESF Course Proposal
Committee on Curriculum - ESF Faculty Governance
Office of Instruction & Graduate Studies

This course proposal form should be completed when introducing a new course or a revision of an existing course. The proposal will be reviewed by the Committee on Curriculum, or, in the case of minor revisions, will be approved administratively by the Associate Provost for Instruction.

This Course Proposal must be completed according to the guidelines provided in Course Proposal Form – Instructions and Guidance. Please see the last page of Course Proposal Form – Instructions and Guidance, for instructions on how this Course Proposal should be submitted to the Committee on Curriculum for review.

Date: August 29, 2017

1. Course Information:

1.1 Course Prefix and Number: RMS 376
Course Title: Decay of Wood Products
(If a new or renumbered course, please check with the Registrar regarding the use or reuse of the course number)

1.2 □ This is a New Course.
OR
□ This is a Major Course Revision
OR
☒ This is a Minor Course Revision

If this is a Course Revision, please see Course Proposal Form – Instructions and Guidance to determine if your revision is major or minor. Indicate below the reason(s) for the revision.

(Please check all that apply)

☒ Course Number/Division □ Learning Outcomes □ Institutional Resources
□ Title □ Concepts, Content □ Semester Offered
□ Credit hours □ Catalog Description □ Course Inactivation
□ Pre- or Co-requisite(s) □ Instructional Methods □ Course Reactivation
□ Format □ General Education

1.3 General Education knowledge and skills area (if applicable): If none, check here ☒

□ American History □ Humanities □ Other World Civilizations
□ The Arts □ Mathematics □ Social Sciences
□ Basic Communication □ Natural Sciences □ Western Civilization
2. **Proposer Need Statement:**

2.1 Describe why this course (or course revision) is needed to meet current or proposed goals and outcomes of the program or College, and, if a revision, provide an explanation of and justification for the revision.  
   Conversion of CME prefix to RMS prefix

2.2 List the pre-requisite or co-requisite courses (taught within the home department or taught by another department) and explain their relationship to the proposed course.  
   RMS 387

2.3 Explain the impact of this course in meeting the goals and outcomes of other Departments/programs (if any). None

2.4 If the proposed course is designed to fulfill SUNY General Education Requirements, the Associate Provost for Instruction must review this proposal to ensure that General Education Requirements will be met for the specified knowledge area (See Instructions and Guidance). Please provide an explanation of how this course fulfills SUNY General Education Requirements.  
   NA

2.5 What are the staffing requirements (instructor, TA, Lab tech, etc.) for this course? If a new course, are there new staffing needs or are there adequate staff members already in place? If a revised course, are there additional staffing needs? Instructor and RA

2.6 What Department (or extra-Department) resources are or will be made available to support the course or course revision? A classroom with a powerpoint projector, white board, overhead projector or document camera. A lab equipped with a transfer hood, autoclave, incubator, refrigerator, forced air oven, light microscope, balances, calipers, supplies.

2.7 Anticipated Enrollment (enter where applicable)

<table>
<thead>
<tr>
<th>Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester:</td>
<td>25</td>
</tr>
<tr>
<td>Spring Semester:</td>
<td></td>
</tr>
<tr>
<td>Summer Semester:</td>
<td></td>
</tr>
</tbody>
</table>

2.8 Anticipated frequency of class meetings. Twice per week
3. DETAILED COURSE DESCRIPTION

3.1 COURSE IDENTIFICATION AND FORMAT:

3.1.1 Course Prefix and Number: RMS 376
3.1.2 Course Name: Decay of Wood Products
3.1.3 Credit Hours: 3
3.1.4 Semester (check all that apply): Fall ☐ Spring ☑ Summer ☐
3.1.5 Format (check as appropriate): Lecture ☑ Online ☐ Lab ☐ Field ☐ Other ☐ (explain)
3.1.6 Contact hours per week: 6
3.1.7 Prerequisite(s) – if none, please enter “None" (Be specific, as Upper Division courses and Graduate courses will likely have some pre-requisite knowledge) RMS 387

3.2 SCOPE:

3.2.1 Level of Instruction (check one, or two if a shared resource course):
   Lower Division ☐ Upper Division ☑
   Beginning Graduate ☐ Advanced Graduate ☐

3.2.2 Relation to curriculum or to other ESF or Syracuse University courses:
   a. Is this a required course? No ☐ Yes ☑.
      If Yes, please list the program(s) for which it is a requirement: Renewable Materials Science
   b. Is this an elective course within your department? No ☑ Yes ☐.
   c. Is enrollment in this course restricted? No ☑ Yes ☐.
      If Yes, please explain:
   d. Are other ESF or SU courses similar or identical to this course? No ☑ Yes ☐.
      If Yes, please identify the courses:
   e. Is this course a shared resource offering (i.e. is there a graduate or undergraduate concurrent offering)? No ☑ Yes ☐.
      If Yes, what is the course number of the concurrent offering?

3.3 STUDENT LEARNING OUTCOMES:

Identify the student learning outcomes associated with this course.

1. Understand basic fungal physiology
2. Know the basic life cycles of fungi: basidiomycetes, ascomycetes and imperfects
3. Have the ability to recognize wood that is decayed by fungi and the type of wood decay
4. Know the microscopic features of the major types of wood decay by fungi
5. Understand the moisture and temperature conditions required for wood decay to occur
6. Understand the effects of each type of decay on wood properties
7. Understand wood degradation by bacteria
8. Know important species of fungi that cause decay
9. Understand methods of wood decay prevention and protection
10. Know methods that are available to inspect wood structures for decay
11. Know how to interpret inspection data and the limitations of inspection equipment
12. Indoor environmental quality; knowledge of mold and molds; perspectives on health effects of mold
13. Knowledge of certain insects that attack wood and the conditions required for attack
14. Knowledge of marine organisms that attack wood
15. Ability to recognize and differentiate non-biological and biological attack of wood

3.4 MAJOR CONCEPTS, PROCESSES or TOOLS:

Identify the course content and themes (e.g. Table of Contents) consistent with the learning domains and outcomes.

Major concepts include the impact of wood decay on the wood products industry and on forest resources, current knowledge regarding processes of biodegradation of wood by fungi and other microorganisms, and other biological decay agents. The proper utilization and protection of wood products, building practices and products that prevent decay will be presented.

This course is designed to provide knowledge of the basic concepts of mycology, wood decay, and the effect of decay on wood properties, especially pertaining to the wood products industries. Topics to be covered include a brief introduction to mycology; descriptions of the three major decay types of decay, brown rot, white rot and soft rot; decay mechanisms; and the occurrence and effects of decay on wood products. Methods for detecting decay in wood products will be presented. The effects on wood properties, including strength, will be studied in relation to wood processing and utilization. The importance of minimizing decay of wood products is discussed in relation to protecting our natural resources. Other topics include the natural durability of wood, the use of preservatives, biopulping, and methods of assessing decay. Attack of wood by other organisms (bacteria, insects, marine organisms) will be briefly discussed. Laboratories and demonstrations include microscopic examination of decayed wood, wood block decay tests, culturing techniques, identification of fungi and effects of decay on wood properties

3.5 INSTRUCTIONAL METHODS:

Identify the methods used to meet the course outcomes, as well as the principal instructional methods. Lecture/demonstrations of wood, fungi, bacteria, and infected wood using microscope projection.

3.6 CATALOG DESCRIPTION
Provide the course description using the precise format to be included in the ESF catalog (i.e. course number and title; format; brief description; semester(s) offered; and pre-/co-requisites). Please do not exceed 1000 characters.

Three hours of lecture/laboratory/demonstration per week. Degradation of wood by fungi and other biological agents. Emphasis on the effects of decay on wood properties, methods of decay detection in wood products and decay prevention. Spring. Prerequisite: RMS 387

3.7 COURSE HISTORY:

Provide the dates of prior approval of this course, and its revision history. First taught in 2000 as a required course for students majoring in Wood Products Engineering. Last approved: 2000. Submitted for change of course prefix August 2017.

3.7.1 Relationship to current ESF courses

This course is replacing a current ESF course ☒ YES ☐ NO

If NO, then proceed to section 4 below.

If YES, then provide below the number and name of the course to be deactivated and removed from the catalog once this course proposal has been approved:

Course Number (of the course to be replaced) CME 376
Course Name (of the course to be replaced) Decay of Wood Products

If the course to be replaced is used by departments other than the department sponsoring this proposal, please indicate below which departments are affected and the date they were notified about the course replacement.

Department: NA Date of Notification:
Department: Date of Notification:
Department: Date of Notification:
Department: Date of Notification:
4. Institutional Impacts:

This section pertains to forecasting institutional resource needs to support the course or course revision. Provide clear statements regarding the needs and current availability (or absence) of resources. Note that, if this is a course revision, only the impacts of the revision should be included.

Staffing needs: Instructor and GA

Classroom resources (e.g. physical facilities in a laboratory, lecture hall, flexible space, academic computing):
Classroom with a powerpoint projector, white board, overhead projector or document camera.
Lab with transfer hood, autoclave, incubator, refrigerator, forced air oven, light microscope, balances, calipers, supplies

Technology Resources:
Computing Resources (software licensing, hardware, access): None
Library Resources (subscriptions, services): None
Transportation Requirements (budget, fees, fleet vehicles): None
Forest Properties or Field Practicum Facilities: None
## 5. Health and Safety Considerations:

Will any of the conditions or situations outlined below be present in association with the course?  

<table>
<thead>
<tr>
<th>5.1. Will substances with any of the following properties be used during instruction: flammability, toxicity, corrosivity, reactivity, registered pesticide, legally controlled, or other characteristics with the potential to cause harm or injury?</th>
<th>Yes / No</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2. Will any physical hazards be present during instruction? (e.g., machines that need safety guards; razor blades or syringes; compressed gases, etc.).</td>
<td>Yes / No</td>
</tr>
<tr>
<td>5.3. Will any biological hazards be present during instruction? (e.g., handling animals (rabies or hantavirus); cultures or stocks of infectious agents (fungal spores, viruses, bacteria, etc.).</td>
<td>Yes / No</td>
</tr>
<tr>
<td>5.4. Will any radiation hazards be present during instruction? (e.g., radioisotopes, X-rays, ultraviolet rays, lasers, etc.).</td>
<td>No / Yes</td>
</tr>
<tr>
<td>5.5. Will any electrical equipment that, due to its design, location, or method of use, pose any threat to safety during instruction? (Give considerable thought to electrical use outdoors, or any potentially wet location.).</td>
<td>No / Yes</td>
</tr>
<tr>
<td>5.6. Will there be any personal safety issues related to the class? (e.g., due to time of day or location, at the end of any organized class exercise, will students be in danger of physical assault, etc.).</td>
<td>No / Yes</td>
</tr>
<tr>
<td>5.7. Will any students be driving official state or research sponsored land or water vehicles during any class or instructional exercise?</td>
<td>No / Yes</td>
</tr>
<tr>
<td>5.8. Will any type of personal protective equipment be necessary during class exercises? (e.g., hard-hats, eye/face protection, hearing protection, hand/foot protection, lab coat, visibility clothing, etc.)</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>

If the answer was “Yes” to any of the **HEALTH AND SAFETY** questions, please explain:  
Health and Safety considerations include flame to sterilize materials for culturing fungi, razor blades for sectioning wood for light microscopy, fungal cultures with potential biological hazard. Gloves may be required for some laboratory exercises. Fungi will be handled in a biological transfer hood (laminar flow hood) to prevent contact.

For lab and field courses to which all answers are “no”, you should explain that here, also. Normally, we would expect some safety precautions for such courses.
6. Coordination and Consultation

Emails/letters, as noted below and attached to this proposal, or signatures below, indicate that the affected departments, programs or units have been notified of this proposal and have had an opportunity to assess the impact of the proposal on their respective units.

**Affected Academic Department(s) or Program(s) – other than the sponsoring department:**

<table>
<thead>
<tr>
<th>Department/Program</th>
<th>Name of Chair/Program Director</th>
<th>Chair Signature</th>
<th>Or letter attached</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department/Program 1</td>
<td>Name of Chair/Program Director</td>
<td>________________</td>
<td>Or letter attached</td>
<td>__________</td>
</tr>
<tr>
<td>Department/Program 2</td>
<td>Name of Chair/Program Director</td>
<td>________________</td>
<td>Or letter attached</td>
<td>__________</td>
</tr>
<tr>
<td>Department/Program 3</td>
<td>Name of Chair/Program Director</td>
<td>________________</td>
<td>Or letter attached</td>
<td>__________</td>
</tr>
</tbody>
</table>

[if more than three Departments/Programs, please continue on a separate page]

**Other Units:**

<table>
<thead>
<tr>
<th>Department/Program</th>
<th>Name of Chair/Program Director</th>
<th>Chair Signature</th>
<th>Or letter attached</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Provost for Instruction &amp; Dean of the Graduate School (for Gen Ed courses only)</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
<tr>
<td>Registrar</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
<tr>
<td>Library Director</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
<tr>
<td>Computing and Network Services</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
<tr>
<td>Physical Plant</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
<tr>
<td>Forest Properties</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>__________________________</td>
<td>Or letter attached</td>
<td>__________</td>
<td></td>
</tr>
</tbody>
</table>
7. Proposer Information and Sponsoring Department Chair Affirmation:

Contact Person:
Name: Robert Meyer  
Department: PBE  
Email: rwmeyer@esf.edu  
Phone: 6838

This proposal has been reviewed and approved by the sponsoring Department. Affected departments have been notified and given the opportunity to provide feedback. Department resources are or will be made available to support the course, or a plan is in place to meet the resource needs as identified in the Institutional Impacts section of this proposal (see Section 4, above).

Name: Robert Meyer  
Date: August 29, 2017  
Department Chair (or designated curriculum representative)
Signature:  
Department Chair (or designated curriculum representative)

Or letter attached □

8. Approvals:

______________________________  ________________________
Curriculum Committee  Date

______________________________  ________________________
Faculty Governance  Date

______________________________  ________________________
Provost  Date