

**INFORMATION FOR SCHOOL OF FOREST RESOURCES GRADUATE STUDENTS**

**Graduate Students Handbook**

**Master of Science  
Master of Forestry  
Doctor of Philosophy**

**SCHOOL OF FOREST RESOURCES**  
[www.forest.umaine.edu](http://www.forest.umaine.edu)  
**COLLEGE OF NATURAL SCIENCES, FORESTRY, AND AGRICULTURE**  
[www.nsf.umaine.edu](http://www.nsf.umaine.edu)

**UNIVERSITY OF MAINE**



**Adopted by**

**The Graduate Faculty of the School of Forest Resources  
December 7, 2012**

**Last Revision: September 14 2023**

## CONTENTS

	<b>PAGE</b>
Preface	3
<b>I. GENERAL INFORMATION FOR GRADUATE STUDENTS</b>	<b>3</b>
1. Graduate Coordinator	3
2. Graduate Faculty	3
3. Representation during Faculty Meetings	3
4. Representation in the Graduate Students Government	4
5. Structure and Flow of Communications	4
6. Work Responsibilities to the School and College	4
7. Graduate School Forms	5
8. Office and Desk Space	5
9. Building and Office Keys	5
10. Mail Boxes	5
11. Photocopying	5
12. Computers Facilities	6
13. Audio-Visual Equipment	6
14. Forest Measurement Equipment	6
15. Office Supplies	6
16. Ordering Equipment and Supplies	6
17. Vehicle Policies	6
18. Insurance Coverage (Vehicle and Other)	7
19. Safety Guidelines	8
20. Sexual Harassment Training	9
21. Concur Travel	9
22. Sick Leave and Vacation	9
23. Specific Facilities and Contacts	10
24. Personnel of the School of Forest Resources and College	11
25. Professional Societies and Clubs	11
<b>II. ACADEMIC POLICIES FOR GRADUATE STUDENTS</b>	<b>11</b>
<b>III. CHECKLIST FOR COMPLETION OF GRADUATE PROGRAM</b>	<b>13</b>
<b>IV. SFR GRADUATE CONCENTRATIONS</b>	<b>15</b>

## Preface

This document has been compiled to provide guidance for the academic and work-related responsibilities of the graduate students within the School of Forest Resources (SFR). The manual is divided into 4 sections: I) General Information for Students, II) Academic Policies for Graduate Students (School of Forest Resources requirements and guidelines), III) Checklist for Completion of Graduate Program and IV) SFR approved graduate concentrations. It is designed to supplement the information in the Graduate School Policies and Regulations (<https://umaine.edu/graduate/facultystaff-resources/policies-and-regulations/>). Graduate students should ask their Graduate Advisor, their Advisory Committee members, the Graduate Coordinator, or Graduate School administrators for additional information or clarification of policies.

First, read thoroughly, the current Graduate Catalog (your entering year), which is available online ([gradcatalog.umaine.edu](http://gradcatalog.umaine.edu)). This catalog contains most of the rules, regulations, and schedules that you must comply with to complete your graduate program, regardless of program changes that may occur. All requirements of the Graduate School must be met.

Second, consult with your Graduate Advisor or the Graduate Coordinator on further interpretation of the Graduate Catalog and for your specific responsibilities.

Finally, read the information contained in this document and consult with your Graduate Advisor or the Graduate Coordinator for further interpretation.

### **I. GENERAL INFORMATION FOR GRADUATE STUDENTS**

#### **1. Graduate Coordinator**

The Graduate Coordinator (currently Dr. Parinaz Rahimzadeh, 2023-2024) is appointed by the SFR Director to advise students and faculty on graduate matters and perform administrative duties as designated by the Dean of the Graduate School and SFR Director.

#### **2. Graduate Faculty**

The Graduate Faculty is comprised of the full-time faculty in the SFR and external faculty members who have applied for and met requirements of scholarly activity set forth by the SFR and Graduate School. To remain an active member, Graduate Faculty must apply and be approved for re-appointment every five years.

#### **3. Representation during Faculty Meetings**

One graduate student (currently Allison Foster, 2022-2023) is appointed annually for representation of graduate student views to the SFR and Graduate Faculty meetings. The graduate student representative does not vote in the faculty motions. Contact your Graduate Coordinator or SFR office staff for the name of your current representative.

#### 4. **Representation in the Graduate Student Government**

One graduate student from the SFR is appointed annually for representation on the Graduate Student Government (GSG). The GSG represents and advocates for graduate student issues on campus and has a representative in UMaine Graduate Board meetings. Check the Graduate School web site for more information on GSG (<https://umaine.edu/gsg/>).

#### 5. **Structure and Flow of Communications**

Although the SFR Director handles financial assistantships and personnel action forms, the Dean of the Graduate School handles most other paperwork through the Graduate Advisory Committees and the Graduate Coordinators. If a grievance should occur, the student should talk with the Graduate Advisor first to try to resolve the problem. If no resolution is forthcoming at that level, then proceed to the Graduate Coordinator, the SFR Director, and lastly the Associate Vice President for Graduate Studies.

#### 6. **Work Responsibilities to the School and College**

Your work responsibilities vary based on your assistantship type. Because graduate assistants receive compensation for services, they have broader obligations and responsibilities to the SFR and College than do either graduate fellows (those on external research fellowships) or students on personal financing. A half-time graduate assistant is expected to devote an average of 20 hours a week, apart from their course work. Depending upon need, the actual time spent may vary greatly from week to week, month to month, and even by semesters. Assistantship duties are of two types:

(1) Major or individual assignments. Graduate assistants are assigned specific responsibilities, which may include teaching, research, and other duties according to your advisor, SFR or College needs. Assignments are generally made on a semester or annual basis. To use the special talents of our students, some assignments may be recurrent; others are generally assigned on a rotating basis.

(2) Routine duties and special assignments (for MAFES RAs and SFR TAs). There are many routine tasks that arise daily to facilitate the efficient functioning of the School, and graduate student assistance may be requested by any of the School or College's professional or clerical staff. These requests range from meeting a plane at the airport, assisting a staff member in tabulation of data, to providing field or laboratory assistance to another graduate student, staff member, or School cooperator at important periods of project research.

If requests for assistance require a substantial amount of the assistant's time, advance arrangements should be made by the staff member through the student's Graduate Advisor and the student concerned and, when necessary, through the SFR Director or College Dean.

Graduate fellows and graduate students on personal financing are not required to work the 20-hour duty schedule. All students are expected to respond to occasional requests for routine assistance as required in the efficient operation of the School.

**7. Graduate School Forms**

Current Graduate School forms (i.e., Program of Study, Thesis Acceptance Form, Concentrations, etc.) are available online at: <https://umaine.edu/graduate/facultystaff-resources/student-forms/>.

**8. Office and Desk Space**

It is the SFR and College policy to assign each Teaching Assistant and Research Assistant a desk. Other graduate students, such as graduate fellows or self-funded students, will be assigned a desk, if available. The SFR office should be contacted for office space assignment. No changes in office allocation will be made without the SFR Director or Administrative Assistant's approval. Students should not leave valuables unattended in their desk space.

**9. Building and Office Keys**

MaineCard access for exterior doors and computer labs can be obtained from the College Technology Coordinator (currently Mark Austin; Nutting) upon your arrival at UMaine. To obtain keys to the graduate student office space, mail room, and other areas as requested by the advisor, students must complete a key sign-out card provided by the SFR Office. This card must also be signed by your Graduate Advisor and the Building Manager. Loss of keys should be reported immediately to Campus Police, Building Manager, and your Graduate Advisor. Students housed in the Advanced Structures and Composites Center or other buildings on campus should check with their Graduate Advisor concerning key cards.

**10. Mail Boxes**

Each graduate student is provided with a box located in the Nutting 253.

**11. Photocopying**

Copying privileges on the SFR photocopier machine (Nutting 253) should be approved by your graduate advisor. The university has installed new copy machines across campus in summer 2023 and policies for student use are still being developed. At this point, please coordinate all copying needs with your advisor. Never leave a copying job unattended in case of jams or running out of paper. Be considerate about restocking paper. Report any problems with the copier to Administrative Specialist (Amy Wagner) in Nutting 201.

**12. Computer Facilities**

The SFR maintains computer clusters in Nutting Hall (rooms 245, 235 and 254) with a broad assortment of software applications including word processing, spreadsheets, database management software, statistical applications, and various specialized software. The computers are Windows based and are connected to the College of Natural Sciences, Forestry and Agriculture network with direct access to the Internet. Students can access these computers by using their @maine.edu username and password. There is a large format plotter available for printing posters for a minimal fee for conference and workshop presentations. Contact Mark Austin (room 208) for printing. There is also a plotter available in Fogler Library.

**13. Audio-Visual Equipment**

Most classrooms and conference rooms are equipped with LCD projectors, which can be used with laptops. A portable projector and laptop can also be borrowed from the SFR Office for presentation purposes if needed. See the Administrative Specialist in 201 Nutting Hall to make a reservation.

**14. Forestry Field Equipment**

Various types of forestry equipment are available for teaching purposes only. Research equipment must be provided by the faculty member's research project.

**15. Office Supplies**

Limited office supplies may be purchased for research projects with your supervisor's or Graduate Advisor's approval. Since these supplies must be charged against a specific account, some discretion is urged.

**16. Ordering Equipment and Supplies**

The supervisor or Graduate Advisor usually initiates the purchasing process through UMaine Marketplace in coordination with the SFR Administrative Specialist. You may coordinate with your graduate advisor in case it is more convenient that the student initiates the purchasing process. Research related expenses made by graduate research assistants can be reimbursed through Concur (UMaine purchasing and reimbursement platform) after graduate advisor approval.

**17. Vehicle Policies**

Graduate students can use the College or University motor pool vehicles for official university business. All graduate teaching and research assistants must have a valid driver's license to drive any University vehicles. Detailed information on Motor Pool policies is found at: <https://umaine.edu/ofm/campus-services/motor-pool/>.

## 18. Insurance Coverage (Vehicle and Other)

**WORKER'S COMPENSATION:** All University employees on official business are covered under provisions of the Worker's Compensation Act. Volunteer laborers and those graduate students on fellowships, scholarships, or who are self-supported have no coverage. They must provide their own. These designations also applies to those participating in student activities. All worker's compensation charges must be paid by the College and will be assigned to accounts in the same manner described for auto collision costs below. Any graduate student having an accident of any type should notify her/his supervisor immediately and fill out and return proper paperwork to the Payroll and Accounting Office. The University also provides medical coverage of \$2,000 per person per accident. All University employees are eligible for comprehensive travel insurance at no cost. This insurance provides \$100,000 of Accidental Death Benefits while traveling on official and authorized University business. Coverage is provided 24 hours per day while away from residence and/or place completed and approved by the SFR Director and Office of Business Services. It is not necessary to complete registration cards or sign up for the insurance; automatic coverage is provided.

**AUTO LIABILITY COVERAGE:** The University System Auto Liability Policy covers all vehicles owned by, or leased to, the University of Maine System. All University vehicle users must read the Administrative Practice Letter: Motor Vehicle Administration and Guidelines located at <https://umaine.edu/ofm/wp-content/uploads/sites/225/2016/10/APL-IIB-Combined-PDF-with-all-documents.pdf>

**PRIVATE OR PERSONALLY OWNED VEHICLES:** It is ordinarily in the best interests of the University if University-owned vehicles are used for conducting University business. However, if this is not possible or practical, personally owned vehicles may be used. Such use is solely at the discretion of the vehicle owner and vehicle driver. Personally owned vehicles used for University-related business should be properly registered, inspected, insured, and appropriate for such use, as determined by the vehicle driver. No private vehicle should be used for University business if the vehicle or usage contradicts this APL. The University requires that personally owned vehicles used for University business carry at least \$300,000 liability insurance. See Attachment II for additional information. Privately owned vehicles drivers must meet the requirements of APL II-B section IV regarding University Approved Drivers.

**HEALTH INSURANCE:** Health insurance is mandatory for all graduate students. Student Health Insurance Plan (SHIP) Insurance is an insurance plan for students not funded on an assistantship or fellowship. All non-international graduate students enrolled in 6 credit hours or more are required to show proof of adequate health insurance coverage. To opt out after the deadline, a SHIP manual waiver form will need to be submitted to the Bursar's office. Please note that the approval is upon the discretion of the insurance company. For more information on student health insurance, please visit <https://go.gallagherstudent.com/Universities/University%20of%20Maine%20System/Home>.

Graduate Assistant Health Insurance is mandatory for all graduate assistants and fellows working 20 hours a week and earning a minimum monthly stipend of \$1888.89, unless proof of comparable insurance is provided. Graduate assistants and teaching assistants Graduate students supported on research or teaching assistantships are not eligible for the SHIP plan. For teaching assistants and research assistants (MAFES or grant funded), 50% of the health insurance is covered, and the student is responsible for the other 50%. The insurance waiver is for the student only. Family coverage is available at the full cost to the student. Eligible students with adequate health insurance must complete an online waiver process to opt out of the plan before the deadline. To opt out after the deadline, a GA manual waiver form will need to be submitted to the Bursar's office. Please note that the approval is upon the discretion of the insurance company. For more information on graduate assistant student health insurance, please visit <https://go.gallagherstudent.com/Universities/University%20of%20Maine%20System/Home>.

International Student Health Insurance is mandatory for all international students, unless proof of insurance is provided to the Office of International Programs. International students are not eligible for the SHIP plan described above. Please visit International Programs: Health Insurance for information on cost at <https://umaine.edu/international/iss/students/health-insurance/>.

## 19. **Safety Guidelines**

a) University and departmental safety policies require several mandatory trainings as part of the graduate student's responsibilities:

- 1) **Sexual Assault Prevention Training** (one time)
- 2) **Basic Safety Training** (annual)
- 3) **Information Security Awareness Training** (annual)

These trainings can be found on the myCampus Portal <https://mycampus.maine.edu/group/mycampus/sm-training>. Students should consult with their advisor about specific lab safety trainings that must be taken prior to use of most chemical or biological laboratories. Specific training and authorization must be obtained prior to the use of any equipment in the Nutting Hall Laboratories or Perkins Hall. Refer to <https://forest.umaine.edu/news-resources/faculty-staff-resources/> for SFR and specific safety policies pertaining to Perkins Hall.

b) Students working in laboratories and certain field situations are required to receive specialized training concerning risks and emergency procedures associated with their work. Discuss this with your supervisor or Graduate Advisor. Visit the Safety and Environmental Management website for more information on safety trainings <https://mycampus.maine.edu/group/mycampus/sm-training>.

c) Each laboratory has a safety plan which includes standard operating protocols, emergency procedures, and evacuation information. You must read and be informed about the plan for any laboratory you are working in.



d) All personnel working at remote sites (defined as in the field and off campus) must have current training in first aid and adult CPR. Annual retraining is required.

e) Material Safety Data Sheets (MSDS) are provided for every laboratory that contains chemicals. Before using any chemicals, read the MSDS associated with them. If you cannot find an MSDS for a specific chemical, ask your lab supervisor or Graduate Advisor to locate the proper MSDS before using the chemical.

f) You must properly use any personal protective equipment (PPE) required for field or laboratory procedures. You must be trained in the proper use of any PPE item before you may use it, and a training form must be filed with the SFR office. Obtain a copy of the general guidelines for PPE requirements and consult with your supervisor to be sure you have the proper PPE and training for the tasks you will be performing.

g) You must be certain that any employees (including student employees and volunteers) under your supervision have received their mandatory annual safety training, any other training for the tasks they will perform, any required PPE with associated training, and follow all applicable policies.

h) The University of Maine workplace safety and hazardous materials policies were developed to satisfy compliance with federal and state laws and regulations. By Maine law, you are obligated to comply with all University safety regulations, policies, and procedures. Failure to do so may result in disciplinary action, including loss of privileges for the use of University research facilities.

## **20. Sexual Harassment Training**

The School of Forest Resources does not tolerate sexual harassment or discrimination. Training regarding sexual harassment is required. Please check UMaine Sexual harassment policies, reporting and training information at: <https://www.maine.edu/human-resources/sexual-harassment/>.

## **21. Concur Travel**

All University travel must be pre-approved by your supervisor/advisor and the Director through the Concur program. There are trainings available on the use of Concur at <https://www.sites.google.com/a/maine.edu/strategic-procurement/home/travel-and-expense-reimbursement-system-training>. Concur is also the program you will use for reimbursement for any pre-approved out-of-pocket purchases.

## **22. Sick Leave and Vacation**

Arrangements for accounting for loss of time from sickness should be discussed with the Graduate Advisor as the situation occurs. Arrange for coverage of research duties; do not let your project fail because you were sick and could not collect data.

There is no official policy on vacation for Graduate Assistants. Ordinarily, time off from official duty is an understandable request and can often be arranged, but this should be discussed thoroughly beforehand with the Graduate Advisor or supervisor who may be affected. These terms are generally outlined in your offer letter.

23. **Specific Facilities and Contacts**

<b>Facility</b>	<b>Contact</b>
Advanced Structures & Composites Center (ASCC Bldg)	ASCC front office <a href="mailto:frontoffice@composites.maine.edu">frontoffice@composites.maine.edu</a>
CFRU Research Storage Building	CFRU Office Nutting 263
Demeritt Forest Buildings	UM Forest Office (K. Kanoti)
Equipment Room	C. Goyette
Forest Products Laboratories	M. Tajvidi and L. Li
Clapp Greenhouses & Auxiliary Greenhouse	B. Libby
Tree Ring Analysis Laboratory	S. Fraver
Perkins Hall	C. London
Remote Sensing/GIS Computers	M. Austin
Wildlife Equipment Storage Facility	Wildlife Ecology Office

## 24. Personnel of the School of Forest Resources and College

A complete description of the Faculty, Professional Staff, Cooperative Faculty, and Faculty Associates of the School of Forest Resources can be found at <https://forest.umaine.edu/people-directory/>. Other college faculty and staff appear under specific program areas on the College web site at <https://forest.umaine.edu/people/department/faculty-staff/>.

## 25. Professional Societies and Clubs Associated with the SFR and College

A list of persons to contact if interested in learning more about the groups listed below can be obtained from the SFR Administrative Assistant. Check the College web page for a list of all clubs: [nsfa.umaine.edu/home/student-clubs-and-organizations/](https://nsfa.umaine.edu/home/student-clubs-and-organizations/)

Student Chapter of the Society of American Foresters  
Student Chapter of the Wildlife Society  
Student Chapter of the Forest Products Society  
Student Chapter of the International Association for Society and Natural Resources  
Xi Sigma Pi  
Society of Wood Science and Technology  
Student Chapter of the National Association for Interpretation (currently inactive)

## II. ACADEMIC POLICIES FOR GRADUATE STUDENTS

A comprehensive description of policies and regulations for your graduate degree is provided by the Graduate School (<https://umaine.edu/graduate/facultystaff-resources/policies-and-regulations/>). All graduate students are expected to review this document and are ultimately responsible for knowledge of the policies of and requirements for completion of their program. Questions which may arise after review of this document can be answered by your advisor, the SFR Graduate Coordinator, and/or the Graduate School.

**All SFR graduate students matriculated into MS thesis or PhD programs are required by Graduate School regulations to complete Responsible Conduct of Research (RCR) training.** This requirement is to be fulfilled before, or concurrently with, enrollment for their first three (3) thesis credits (SFR 699). The RCR training requirement can be fulfilled by completing a stand-alone RCR course (INT 601, 1 credit) or by completing a course with a RCR component approved by the University of Maine Office of Research and Sponsored Programs and the Graduate School (SFR 521: Research Methods). With permission of the student's advisory committee, this requirement can be substituted for one (1) credit of thesis (SFR 699) credit requirements. Students matriculated before the summer of 2014 are exempted from this requirement unless RCR training is mandated by a

supporting agency. RCR training is not required for students enrolled in non-thesis graduate (Master of Forestry) and certificate programs.

The SFR offers three graduate level degrees: Master of Forestry, Master of Science in Forest Resources, and Doctor of Philosophy in Forest Resources. Additional guidance about the requirements for each of the programs can be found on the SFR website.

Master of Forestry (M.F.):  
[www.forest.umaine.edu/prospective-students/graduate-programs/master-of-forestry/](http://www.forest.umaine.edu/prospective-students/graduate-programs/master-of-forestry/)

Master of Science in Forest Resources (M.S.):  
[www.forest.umaine.edu/prospective-students/graduate-programs/master-of-science-in-forest-resources/](http://www.forest.umaine.edu/prospective-students/graduate-programs/master-of-science-in-forest-resources/)

Doctor of Philosophy in Forest Resources (Ph.D.):  
[www.forest.umaine.edu/prospective-students/graduate-programs/doctor-of-philosophy-in-forest-resources/](http://www.forest.umaine.edu/prospective-students/graduate-programs/doctor-of-philosophy-in-forest-resources/)

### III. CHECKLIST FOR COMPLETION OF GRADUATE PROGRAM

	WHAT TO DO	WHEN
1	Selection of Committee	By the end of the first semester
2	Review of Literature, Thesis or Dissertation Proposal (send to committee in advance of first meeting)	By the beginning of the second semester. Completion before research is initiated.
3	First committee to review thesis or dissertation proposal and program of study form	Prior to Item 4.
4	Program of Study <sup>b</sup> filed with Graduate School	By the end of the second semester
5	Committee communications to advise of progress and/or modify plans	At least once per semester
6	Comprehensive Examination <sup>a,b</sup>	At least 1 1/2 years beyond MS. Most of the coursework completed.
7	Admission to Candidacy <sup>a</sup>	Comprehensive examination passed
8	Request for Change in Program <sup>b</sup>	Anytime
9	Application for Degree	Final semester. Check Graduate School deadline
10	Public presentation	Usually on the day of the thesis or dissertation defense

11	Final draft of thesis or dissertation	Provide to thesis advisor approximately one (1) month prior to anticipated date of final oral examination
12	Submission of thesis or dissertation to graduate school	The thesis, in a form acceptable for examination purposes, must be delivered to the Graduate School no later than 5 days prior to final oral examination
13	Tentative Thesis or Dissertation Acceptance <sup>b</sup>	At least 24 hours prior to final thesis defense
14	Draft of paper(s) for publication	Before graduation date
15	Final oral thesis or dissertation defense and Final Thesis Acceptance <sup>b</sup>	At least 1 week before end of semester (Graduate School deadline)
16	Completion of Requirements Form <sup>b</sup> Notify Graduate Coordinator	After final thesis acceptance

<sup>a</sup> Ph.D. only

<sup>b</sup> Students are responsible for making sure that a copy of these forms are placed in their graduate file in the SFR office (Nutting 201) and that the originals are delivered on time to the Graduate School.

Please see the link below for updated checklist of deadlines for graduation:  
<https://docs.google.com/spreadsheets/d/1ut77i7nmhyco2Ot3zjM4GrO8gJZy3A3z5jqEdnemtFk/edit#gid=1831627793>

Current Graduate School forms (i.e., Program of Study, Thesis Acceptance Form, etc.) are available online at <https://umaine.edu/graduate/facultystaff-resources/student-forms/>.

## **IV. SFR GRADUATE CONCENTRATIONS**

### **Background:**

The School of Forest Resources (SFR) traditionally offered its Master of Science and Ph.D. graduate degrees under the general title of “Forest Resources”. Given the diverse nature of the graduate studies at SFR ranging from social sciences to advanced biomaterials, the need for specialized graduate degrees, and to benefit current and future graduate students in the job market, Graduate Concentrations were developed within the Forest Resources graduate program.

Effective Fall 2018, five graduate concentrations have been introduced:

1. Forest Ecosystem Science
2. Forest Policy and Economics
3. Human Dimensions of Natural Resources
4. Bioproducts Engineering
5. Parks, Recreation and Tourism

### Notes:

1. In order to qualify for graduate concentrations, the students must pass at least four (4) courses from the list corresponding to each concentration as provided in Appendix A. One of the four required courses for all concentrations is SFR-521: Research Methods.
2. Other requirements for the graduate concentrations are determined on a case-by-case basis by the Graduate Advisory Committee of the graduate student and will be outlined in the student’s Program of Study. These may include specific courses, research topic, or advisory committee composition requirements.
3. The graduate concentrations will be optional. A general Forest Resources degree will still be offered.

## Appendix A: List of elective courses for each SFR Graduate Concentration

### **Forest Ecosystem Science**

BIO 525 Community Ecology  
BIO 572 Paleoecology  
BIO 568 Advanced Plant Ecology  
BIO 532 Biology of the Fungi  
BIO 462 River Ecology  
BIO 468 Lake Ecology  
BIO 430 Ecology and Systematics of Aquatic Insects  
ERS 441 Glaciers and Out Landscapes  
ERS 521 Low Temperature-Pressure Geochemistry  
ERS 580 Introduction to Hydrogeology  
SFR 503 Advanced Forest Measurements & Modeling  
SFR 520 Tree Physiology  
SFR 521 Research Methods  
SFR 526 Dendrochronology  
SFR 539 Biology of Woody Plants  
SFR 555 Advanced Remote Sensing  
SFR 557 Tree Pests and Disease  
SFR 575 Advanced Forest Biometrics  
SFR 507 Forest Ecology  
SFR 605 Forest Ecosystem Science  
PSE 440 Soil and Environmental Chemistry  
PSE 469 Soil Microbiology  
WLE 423 Wetland Ecology and Conservation  
WLE 431 Wildlife Management in Forestry  
WLE 479 Wildlife Conservation in a Changing World

### **Forest Policy and Economics**

ECO 514 Microeconomic Theory OR ECO 410 Accelerated Introductory Economics  
ECO 530 Econometrics OR ECO 485 Introduction to Economic Statistics and Econometrics  
ECO 571 Advanced Environmental & Resource Econ I  
ECO 572 Advanced Environmental & Resource Econ II  
ECO 527 Regional Economics: Modeling  
SFR 502 Timber harvesting  
SFR 504 Rural Communities: Theory and Practice  
SFR 521 Research Methods  
SFR 544 Forest Economics  
SFR 546 Forest Policy  
SFR 548 Quantitative Social Science for Natural Resource Management  
SFR 577 Forest Management



## **Human Dimensions of Natural Resources**

ANT 500 Advanced Social Theory  
ANT 510 Climate, Culture and the Biosphere  
ANT 530 Human Dimensions of Climate Change  
ANT 521/522 (GIS I & II)  
ANT 550 Anthropological Dimensions of Environmental Policy  
ANT 553 Institutions and the Management of Common Pool Resources  
ANT 564 Ecological Anthropology  
BIO 593 Advanced Biometry  
CMJ 580 Environmental Communication  
CMJ 604 Qualitative Communication Research Methods  
CMJ 608 Communication Theory  
CMJ 610 Seminar in Risk Communication  
ECO 581 Agent-based Modeling  
EHD 571 Qualitative Research: Theory, Design, and Practice  
INT 527 Integration of GIS and Remote Sensing  
PSY 561 Advanced Social Psychology  
PSY 630 Current Topics in Social Psychology  
SFR 400 Applied GIS  
SFR 504 Rural Communities: Theory and Practice  
SFR 521 Research Methods  
SFR 528 Qualitative Data Analysis Natural Resources  
SFR 546 Forest Policy  
SFR 548 Quantitative Social Science for Natural Resource Management  
SFR 593 Sustainable Tourism Planning  
SFR 555 Advanced Remote Sensing  
SMS 552 Coupled Natural & Human Systems  
SMS 563 Fisheries Policy and Management  
SMS 567 Knowledge and Participation in the Science Policy Process

## **Bioproducts Engineering**

BMB 520 Introduction to Image Analysis  
CHE 410 Advanced Materials  
CHY 523 Advanced Polymer Chemistry  
CIE 544 Design of Wood and Masonry Structures  
CIE 543 Introduction to Composite Materials in Civil Engineering  
CIE 549 Numerical Methods in Engineering  
CHY 583 Advanced Wood Chemistry  
CET 413 Statics and Strength of Materials  
CET 414 Structural Design  
CIE 644 Advanced Composite Materials

MAT 453 Partial Differential Equations I  
MEE 456 - Introduction to Finite Element Method  
INV 510 Innovation Engineering Accelerated  
INV 511 Experience: Innovation Engineering Case Study  
INV 590 Using Innovation: Proposal & Project  
PSE 509 Experimental Design  
SFR 450 Processing of Biomaterials  
SFR 455 Bioenergy Sources, Systems, and Environmental Effects  
SFR 456/556 Physical and Mechanical Properties of Sustainable Materials  
SFR 453 Biocomposite Materials  
SFR 521 Research Methods in Forest Resources  
SFR 531 Mechanics of Wood and Wood Composites  
SFR 530 Wood Physics  
SFR 550 Wood-Polymer Hybrid Composites  
SFR 570 Cellulose Nanomaterials and their Composites  
SFR 545 Adhesion & Adhesives Technology  
STS 434 Introduction to Statistics

### **Parks, Tourism and Recreation**

ANT 500 Advanced Social Theory  
ANT 597: Research Design and Methods  
ANT 550 Anthropological Dimensions of Environmental Policy  
ANT 553 Institutions and the Management of Common Pool Resources  
ANT 564 Ecological Anthropology  
CMJ 580 Environmental Communication  
CMJ 604 Qualitative Communication Research Methods  
ECO 581 Agent-based Modeling  
ECO 527 Regional Economics: Modeling  
EHD 571 Qualitative Research: Theory, Design, and Practice  
PSY 561 Advanced Social Psychology  
PSY 630 Current Topics in Social Psychology  
SFR 400 Applied GIS  
SFR 521 Research Methods  
SFR 593 Sustainable Tourism Planning  
SFR 528 Qualitative Data Analysis Natural Resources  
SFR 504 Rural Communities: Theory and Practice  
SFR 544 Forest Economics  
SFR 546 Forest Policy  
SFR 548 Quantitative Social Science for Natural Resource Management  
SFR 555 Advanced Remote Sensing  
SMS 552 Coupled Natural & Human Systems  
SMS 567 Knowledge and Participation in the Science Policy Process