



University Council

February 14, 2020

UNIVERSITY CURRICULUM COMMITTEE – 2019-2020

John Maerz, Chair

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Education – Morgan Faison

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Journalism and Mass Communication – James Hamilton

Law – Randy Beck

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Public and International Affairs – Jeffrey Berejikian

Public Health – Brittani Harmon

Social Work – Harold Briggs

Veterinary Medicine – Susan Sanchez

Graduate School – Amy Medlock

Ex-Officio – Provost S. Jack Hu

Undergraduate Student Representative – Melissa Hevener

Graduate Student Representative – Jordan Henley

Dear Colleagues:

The attached proposal from the Warnell School of Forestry and Natural Resources to create new areas of emphasis under the following majors will be an agenda item for the February 21, 2020, Full University Curriculum Committee meeting:

- Master of Forest Resources (M.F.R.)
- Master of Natural Resources (M.N.R.)
- Forestry and Natural Resources (M.S.)
- Forestry and Natural Resources (Ph.D.)

The new areas of emphasis are:

- Area of Emphasis in Community Forestry and Arboriculture under the M.N.R., M.S., and Ph.D.
- Area of Emphasis in Environmental Education under the M.N.R.
- Area of Emphasis in Fisheries Science under the M.N.R.
- Area of Emphasis in Forest Biology under the M.N.R., M.S., and Ph.D.
- Area of Emphasis in Forest Business under the M.F.R.
- Area of Emphasis in Forestry under the M.F.R.
- Area of Emphasis in Geospatial Information Science under the M.N.R., M.S., and Ph.D.
- Area of Emphasis in Parks, Recreation, and Tourism Management under the M.N.R.
- Area of Emphasis in Water and Soil Science under the M.N.R.

Sincerely,



John Maerz, Chair'
University Curriculum Committee

cc: Provost S. Jack Hu
Dr. Rahul Shrivastav

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Programs (Major and Degree): Forestry and Natural Resources (M.S.)
Forestry and Natural Resources (Ph.D.)
Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Community Forestry and Arboriculture

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Community Forestry and Arboriculture.

Choose at least one of the following (3-7 hours):

COFA 7010-7010L, Urban Tree Management II (4 hours)

COFA 7500, Community Forest Management (3 hours)

Choose additional courses from the following (2-6 hours):

COFA 7001, Urban Tree Management I (3 hours)

COFA 7301, Community and Urban Soils and Site Development (4 hours)

COFA 7980*, COFA Problems (2 hours)

*Course proposal in progress

Major Requirements:

Forestry and Natural Resources (M.S.) requires a minimum of 30 semester hours of graduate-level coursework, which must include FANR 6750-6750D, Experimental Methods in Forestry and Natural Resources Research, FANR 8200, Scientific Research in Forestry and Natural Resources, FANR 7300, Master's Thesis (3 hrs.), and Master's Research (FANR 7000, 6 hrs.).

Forestry and Natural Resources (Ph.D.) requires a minimum of 30 semester hours of graduate-level coursework, which must include 16 hours of 8000/9000-level coursework, and FANR 9000, Doctoral Dissertation (6 hrs.), and FANR 9300, Doctoral Research (3 hrs.).

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Environmental Education

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Environmental Education.

Required Courses (6 hours):

ALDR 8150, Program Development for Agricultural Leaders (3 hours)

FANR 6444S, Foundations of Environmental Education (3 hours)

Choose three additional hours from the following (3 hours):

PRTM 7800S, Environmental Interpretation (3 hours)

PRTM 7980, Parks, Recreation, and Tourism Management Problems (1-2 hours)

PRTM 8980, Parks, Recreation, and Tourism Management Problems (1-2 hours)

3. Major Requirements:

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Fisheries Science

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Fisheries Science.

Required Course (4 hours):

FISH 7360-7360L, Fish Management (4 hours)

Elective Courses (5 hours):

Choose five hours from the following courses:

FISH 4500/6500-4500L/6500L, Fish Physiology (4 hours)

FISH 6600, Sustainable Aquaculture (3 hours)

FISH 6650L, Georgia Fishes Field Study (4 hours)

FISH 7980, Fisheries and Aquaculture Problems (1-12 hours)

FISH 8300, Fisheries and Wildlife Seminar (1-2 hours)

FISH 8350, Fundamentals of Ecotoxicology (3 hours)

FISH 8400, Advanced Fish Ecology and Conservation (3 hours)

3. Major Requirements:

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Forestry and Natural Resources (M.S.)
Forestry and Natural Resources (Ph.D.)
Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Forest Biology

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Forest Biology.

Choose at least one of the following courses (3-6 hours):

FORS 8030, Advanced Tree Physiology (3 hours)

FORS 8100, Advanced Forest Ecology (3 hours)

Choose additional course(s) from the following courses (3-6 hours):

FANR 8140, Functional Genomics (3 hours)

FORS 6010-6020L, Silviculture (4 hours)

FORS 6030, Regional Silviculture (3 hours)

FORS 6210, Forest Health and Protection (3 hours)

FORS 6777, Precision Silviculture (3 hours)

FORS 8080, Forest Health Seminar Series (1 hour)

FORS 8220-8220L, Advanced Forest Entomology (3 hours)

FORS 8230-8230D, Tree Resistance Mechanisms and Plant Defense Theories (3 hours)

HORT 8150, Plant Growth and Development (3 hours)

PBIO 6500, Introduction to Gene Technology (3 hours)

WASR 6000-6000L, Forest Soil Management (3 hours)

3. Major Requirements:

Forestry and Natural Resources (M.S.) requires a minimum of 30 semester hours of graduate-level coursework, which must include FANR 6750-6750D, Experimental Methods in Forestry and Natural Resources Research, FANR 8200, Scientific Research in Forestry and Natural Resources, FANR 7300, Master's Thesis (3 hrs.), and Master's Research (FANR 7000, 6 hrs.).

Forestry and Natural Resources (Ph.D.) requires a minimum of 30 semester hours of graduate-level coursework, which must include 16 hours of 8000/9000-level coursework, and FANR

9000, Doctoral Dissertation (6 hrs.), and FANR 9300, Doctoral Research (3 hrs.).

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Master of Forest Resources (M.F.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Forest Business

2. Area of Emphasis Description:

Students will complete 34 hours for the Area of Emphasis in Forest Business.

Required Courses (14 hours):

ACCT 6000, Financial Accounting (3 hours)

FINA 7010, Financial Management (3 hours)

FORS 7750, Procurement and Management of Wood Fiber Supply (3 hours)

FORS 7780, Timberland Accounting, Finance, and Taxation (3 hours)

FORS 8010, Forest Business Seminar or FORS 8020, Bio-Based Economy Seminar (1 hour)

Choose nine hours from the following courses (9 hours):

FANR 6810, Natural Resources Law (3 hours)

FORS 6200, International Forest Business (3 hours)

FORS 6570*, Practical Wood Identification (2 hours)

FORS 6640, Advanced Forest Inventory (3 hours)

FORS 6650, Forestry Field Camp (4 hours)

FORS 6710, Forest Planning (3 hours)

FORS 7070, Forest Resource Consulting and Real Estate Practices (3 hours)

FORS 7550, Wood Quality (3 hours)

FORS 7630, Intensive Forest Management (3 hours)

FORS 7650, Aerial Photography (3 hours)

FORS 7690, Forestry GIS (3 hours)

FORS 7710, Advanced Forest Economics (3 hours)

FORS 7720, Forest Harvesting and Roads (3 hours)

FORS 7760, Forest Products Marketing (3 hours)

FORS 7790, Forest Finance Decisions (3 hours)

FORS 7860*, Resource Economics and Management (3 hours)

FORS 7900, Forest Operations Management and Planning (3 hours)

FORS 8020, Bio-based Economics Seminar (1-3 hours)

Elective Courses (11 hours)

Choose courses in consultation with an advisor

*Course proposal in progress

3. Major Requirements:

The Master of Forest Resources (M.F.R.) requires a minimum of 34 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required. The M.F.R. degree is accredited by the Society of American Foresters.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Master of Forest Resources (M.F.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Forestry

2. Area of Emphasis Description:

Students will complete 34 hours for the Area of Emphasis in Forestry.

Required Courses (12 hours):

FORS 6010-6010L, Silviculture (4 hours)

FORS 6610-6610L, Forest Mensuration (4 hours)

FORS 6620, Timber Management (4 hours)

Electives (22 hours):

Forestry graduate coursework: Choose courses in consultation with an advisor.

3. Major Requirements:

The Master of Forest Resources (M.F.R.) requires a minimum of 34 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required. The M.F.R. degree is accredited by the Society of American Foresters.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Forestry and Natural Resources (M.S.)
Forestry and Natural Resources (Ph.D.)
Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Geospatial Information Science

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Geospatial Information Science.

Requirements for the M.S. and M.N.R.

Choose one of the following courses (3 hours):

FANR 7620-7620L, GIS Applications for Natural Resources (3 hours)

FORS 7690-7690L, Applied Geographic Information Systems for Forest Resource Management (3 hours)

Choose additional courses from the following (6 hours):

FANR 7640-7640L, Unmanned Aerial Systems' Role in Natural Resource Management (3 hours)

FANR 8400, Advanced Spatial Analysis for Natural Resources (1-4 hours)

FANR 8500, Agent Based Modeling in Ecology and Management (3 hours)

FORS 7650-7650L, Aerial Photography in Forestry (3 hours)

FORS 7670, Forestry Information Systems (3 hours)

FORS 8450, Advanced Forest Planning (3 hours)

WILD 8330, Landscape Ecology (3 hours)

Requirements for the Ph.D.

FANR 8400, Advanced Spatial Analysis for Natural Resources (3 hours)

Choose additional courses from the following (6 hours):

FANR 7640, Unmanned Aerial Systems' Role in Natural Resource Management (3 hours)

FANR 8500, Agent-Based Modeling in Ecology and Management (3 hours)

FORS 7650, Aerial Photogrammetry in Forestry (3 hours)

FORS 7670, Forestry Information Systems (3 hours)

FORS 8450, Advanced Forest Planning (3 hours)
WILD 8330, Landscape Ecology (3 hours)

3. Major Requirements:

Forestry and Natural Resources (M.S.) requires a minimum of 30 semester hours of graduate-level coursework, which must include FANR 6750-6750D, Experimental Methods in Forestry and Natural Resources Research, FANR 8200, Scientific Research in Forestry and Natural Resources, FANR 7300, Master's Thesis (3 hrs.), and Master's Research (FANR 7000, 6 hrs.).

Forestry and Natural Resources (Ph.D.) requires a minimum of 30 semester hours of graduate-level coursework, which must include 16 hours of 8000/9000-level coursework, and FANR 9000, Doctoral Dissertation (6 hrs.), and FANR 9300, Doctoral Research (3 hrs.).

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Parks, Recreation, and Tourism Management

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Parks, Recreation, and Tourism Management.

Required Course (3 hours):

PRTM 6700*, Social Science Methods (3 hours)

Choose additional courses from the following (6 hours):

PRTM 6400, Park Management (3 hours)

PRTM 7010, Entrepreneurship in Recreation and Tourism (3 hours)

PRTM 7410, Stewardship and Protected Natural Resource/Wilderness Management (3 hours)

PRTM 7700, Community Tourism: Impacts, Planning, and Management (3 hours)

PRTM 7800S, Environmental Interpretation (3 hours)

PRTM 7900, Ecotourism and Sustainable Development (3 hours)

PRTM 7980, PRTM Problems (1-12 hours)

PRTM 8980, PRTM Problems (1-12 hours)

*Course proposal in progress

3. Major Requirements:

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

PROPOSAL FOR AN AREA OF EMPHASIS

Date: December 18, 2019

School/College: Warnell School of Forestry and Natural Resources

Department/Division: Warnell School of Forestry and Natural Resources

Program (Major and Degree): Master of Natural Resources (M.N.R.)

Which campus(es) will offer this program? Athens

Proposed Effective Date: Fall 2020

1. Area of Emphasis Title: Water and Soil Science

2. Area of Emphasis Description:

Students will complete 9 hours for the Area of Emphasis in Water and Soil Science.

Choose from the following courses (9 hours):

CRSS 6540-6540L, Pedology (3 hours)

CRSS 6600-6600L, Soil Physics (3 hours)

ECOL 8850-8850L, Terrestrial Biogeochemistry (4 hours)

ENTO 8150, Wetland Ecology (3 hours)

GEOL 8710, Watershed-Scale Modeling (3 hours)

WASR 6000-6000L, Forest Soil Management (3 hours)

WASR 6110-6110L, Forest Hydrology (4 hours)

WASR 6500, Quantitative Methods in Hydrology (3 hours)

WASR 8730, Aquifer Mechanics (3 hours)

3. Major Requirements:

The Master of Natural Resources (M.N.R.) requires a minimum of 33 semester hours of graduate-level coursework approved by the student's Advisory Committee. No thesis is required.

Approvals on File

Proposal: New Areas of Emphasis under Graduate Majors in School of Forestry

College: Warnell School of Forestry and Natural Resources

Department: Warnell School of Forestry and Natural Resources

Proposed Effective Term: Fall 2020

School/College:

- Warnell School of Forestry and Natural Resources Dean, Dr. W. Dale Greene, 1/27/20

Graduate School:

- Graduate School Interim Dean, Dr. Ron Walcott, 1/28/20