APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the *Guide and Format for Curriculum Proposals* published by the UCCC. Both cover sheet and proposal should be submitted to UCCC Mail Stop 9702 (281 Garner Hall), Phone: 325-9410.

College: Forest Resources **Department:** Forestry

Contact Person: Courtney Siegert **Mail Stop:** 9681
E-mail: Courtney.Siegert@msstate.edu

Nature of Change: Modification **Date Initiated:** 2/10/23 **Effective Date:** 8/15/23

Current Degree Program Name: Bachelor of Science

Major: Forestry **Concentration:** Environmental Conservation, Forest Business Forest Management, *Forest Products*, Urban Forestry, Wildlife Management

New Degree Program Name: Bachelor of Science

Major: Forestry **Concentration:** Environmental Conservation, Forest Business Forest Management, Urban Forestry, Wildlife Management

Summary of Proposed Changes: The following degree modifications are proposed.

1. Minor corrective editorial changes were made to the degree description, concentration advisors, and footnote numbering.
2. Forest Products Concentration was deleted and related changes were made to General Education and Concentration requirements to reflect this change as indicated in the curriculum outline. See attached letter of support from Department of Sustainable Bioproducts (formerly Department of Forest Products).
3. In General Education Extra Science, deleted "or PH 1113 General Physics[1]" associated with Physical Science Elective because we are eliminating the Forest Products concentration that specifically required PH 1113. To match all of the other College of Forest Resources curricula, Chemistry is kept as the sole Extra Science and the Physical Science Elective is moved to the Major Core Course section. Added CH 1213 Chemistry as substitute for CH 1043 Survey of Chemistry I.
4. In General Education – Math, deleted 3 credits of math requirement listed under "See Concentration (3)." The header for this section was also renamed "Quantitative Reasoning." This reduction from 6 to 3 credits aligns with the new general education requirements for Quantitative Reasoning. These 3 credits are moved to the Concentration

courses. Also added “Or ST 3123 Intro to Stat Inf” as an option for Quantitative Reasoning requirement. Revised footnote for BQA 2113 to read, “Accepted for all concentrations but required for Forest Business Concentration” to clarify which concentrations have course options and which concentrations have specific course requirements.

5. In General Education – Social/Behavioral Sciences, added EC 2113 Macroeconomics and EC 2123 Microeconomics as accepted substitutes to AEC 2713 Intro to Food and Resource Econ.
6. In General Education – Oral Communication, added CO 1013 Intro to Communication as an option for Oral Communication requirement.
7. In General Education – Writing, changed AELC 3203 Prof. Wri in Ag, NR & Hu Sci to “Technical Writing Elective (3)” for writing requirement. The Department of Forestry will maintain a list of approved electives that currently includes AELC 3203, MGT 3213 Organ Comm, BIO 3013 Prof Writing for Biologists, EN 3313 Writing for the Workplace, and EDF 3413 Writing for Thinking).
8. In General Education, subtotal credit hours were changed from 47 to 41 to reflect changes in #3 and 4.
9. In Major Core Courses, added FO 3123 Tree Physiology as required course. Also moved GR 1113 Physical Geography to this section. The now independent laboratory for GR 1111 is no longer required. Subtotal credit hours were changed from 54 to 60 to reflect these changes.
10. In ENCO Concentration, deleted MA 1313 College Algebra and associated footnote and added 3 credits of Free Elective to the concentration to reflect the change in #4 above.
11. In ENCO Concentration, deleted WFA 3133 Applied Ecology. We have determined that the Major Core Course FO 4123 Forest Ecology is sufficient for this concentration. Students may take WFA 3133 as an elective if they wish, but it will no longer be required. This deletion also allows us to add FO 3123 Tree Physiology as a Major Core Course without changing the total curriculum hours.
12. In ENCO Concentration, changed FO 4453 Remote Sensing Appl to “Geospatial Elective (3).” The Department of Forestry will maintain a list of approved electives that currently includes FO 4453 Remote Sensing Appl and FO 4473 GIS Nat Res Mgmt. These two courses are currently listed as approved substitutes for each other and are offered in alternating spring semesters, thus change this requirement to an electives list removes administrative burden of processing substitutes.
13. In ENCO Concentration, added FO 4483 Forest Soils as a required course.
14. In ENCO Concentration, consolidated number of Emphasis Elective credit hours to account for changes in #10-13 above and added one additional credit hour to get to a number of Emphasis Elective credit hours (12), which is divisible by three. This results in an increase in the concentration subtotal credit hours from 26 to 27 and an increase in the curriculum total from 127 to 128. Now all of our concentrations have 27 credit hours of concentration courses and 128 total credit hours for the curriculum. This change was made, in part, as a result of a recommendation of our Student Services Coordinator and discussions with the Registrar’s office to remedy issues in CAPP/Degree works caused by

differences in credit hours across our concentrations. In most cases, students were taking an extra credit hour to fulfill the 14 credit hours of the Emphasis Electives. Renamed category as “Professional Elective” to coincide with other Concentrations.

15. In FOBN concentration, deleted MA 1313 College Algebra and associated footnote and added 3 credits of Free Elective to the concentration to reflect the change in #4 above.
16. In FOBN concentration, deleted SBP 1103 Intro to Sustainable Bioproducts. This deletion also allows us to add FO 3123 Tree Physiology as a Major Core Course without changing the total curriculum hours.
17. In FOMG concentration, deleted MA 1313 College Algebra and associated footnote and added 3 credits of Free Elective to the concentration to reflect the change in #4 above.
18. In FOMG Concentration, added FO 3203 Forest Fire as a required course.
19. In FOMG Concentration, added FO 4253 Timber Procurement as a required course.
20. In FOMG Concentration, added “Geospatial Elective (3)” as a required course. The Department of Forestry will maintain a list of approved electives that currently includes FO 4453 Remote Sensing Appl and FO 4473 GIS Nat Res Mgmt.
21. In FOMG Concentration, added “Ecosystem Service Elective (3)” as a required course. The Department of Forestry will maintain a list of approved electives that currently includes FO 4463 Forest Hydro & Watershed Mgt and FO 4483 Forest Soils.
22. In FOMG Concentration, deleted the category “Business/Science Elective (9)” and reallocated credits to newly required classes in #18-21.
23. In FOMG concentration, reallocated credit hours in “Professional Elective” category to 6 credits to reflect addition of required classes in #18-21.
24. Deleted FP Concentration.
25. In URBN Concentration, deleted MA 1313 College Algebra and associated footnote and added 3 credits of Free Elective to the concentration to reflect the change in #4 above.
26. In URBN Concentration, deleted REF 3333 Principles of Real Estate from required concentration courses. This deletion also allows us to add FO 3123 Tree Physiology as a Major Core Course without changing the total curriculum hours.
27. In URBN Concentration, changed FO 4473 GIS Nat Res Mgmt to “Geospatial Elective (3).” The Department of Forestry will maintain a list of approved electives that currently includes FO 4453 Remote Sensing Appl and FO 4473 GIS Nat Res Mgmt. These two courses are currently listed as approved substitutes for each other and are offered in alternating spring semesters, thus change this requirement to an electives list removes administrative burden of processing substitutes.
28. In WFMG Concentration, deleted MA 1313 College Algebra and associated footnote and added 3 credits of Free Elective to the concentration to reflect the change in #4 above.
29. In WFMG Concentration, deleted “FO 3213 Tree Physiology OR …” due to FO 3213 becoming a Major Core Course (#9). Students will no longer have option of other courses in the list and must take FO 3213. In practice, almost all students already take FO 3213.

30. In WFMG Concentration, deleted BIO 3524 Biology of Vertebrates. This was previously fulfilling 3 credits of the Zoology requirement for The Wildlife Society (TWS) certification, but EPP 3124 Forest Pest Management, a Major Core Course, will also fulfill the Zoology requirement. This frees up those credits to be applied as a Professional Elective. Since the previous Professional Elective was restricted to courses fulfilling the TWS Zoology requirement, a new category for the Zoology Elective (3) is created to more accurately reflect the list of acceptable courses. The Department of Forestry will maintain a list of approved Zoology Electives that currently includes ADS 3013/3031 Anatomy and Physiology + Lab, BIO 3103 Genetics, BIO 3504 Comparative Anatomy, BIO 3524 Biology of Vertebrates, EPP 4143 Insect Ecology, EPP 4154 General Entomology, WFA 4263 Wildlife Diseases, WFA 4313 Fisheries Management, WFA 4323 Wild Nut & Phy, WFA 4453 Ichthyology.
31. In WFMG Concentration, deleted WFA 3133 Applied Ecology We have determined that the Major Core Course FO 4123 Forest Ecology is sufficient for this concentration and have consulted with the Department of Wildlife, Fisheries & Aquaculture to confirm that FO 4123 will be accepted as a prerequisite for WFA courses where WFA 3133 is listed as a prerequisite. Students may take WFA 3133 as an elective if they wish, but it will no longer be required. The credit hours for WFA 3133 are moved to the “Professional Electives” category and an additional two credits are added to the category for a total of nine credits. This results in an increase in the concentration subtotal credit hours from 25 to 27 and an increase in the curriculum total from 126 to 128. The rationale for this change is the same as in #14. The Department of Forestry will maintain a list of approved Professional Electives that includes FO 3113 Forest Recreation Management, FO 3203 Forest Fire, FO 4343 Forest Administration and Organization, FO 4453 Remote Sensing Appl, and FO 4473 GIS Nat Res Mgt along with any 3000- or 4000-level CFR course.
32. In WFMG Concentration, WFA 4433 Mammalogy and WFA 4443 Ornithology are combined into a 3-credit course option listed as “Wildlife Biology Elective (3).” Previously TWS certification required two “ology” courses but TWS requirements have changed to only require one “ology” course, thus it is no longer necessary for our students to be required to take both WFA 4433 and WFA 4443. However, students may take the second class as a Professional Elective if they wish.
33. In WFMG Concentration, the separate listing of WFA 4443 Ornithology is changed to “Wildlife Management Elective (3)” to allow students to pick any other course that fulfills the Wildlife Management and Biology requirement for TWS. The Department of Forestry will maintain a list of approved electives that currently includes FO 3113 Forest Recreation Management, WFA 4273 Ecology & Management of Human-Wildlife Conflicts, WFA 4283 Human-Wildlife Conflicts Techniques, WFA 4373 Principles of Conservation Ag Landscape, WFA 4394 Waterfowl Ecology and Management, WFA 4473 Wildlife and Fisheries Practices, WFA 4484 Upland Avian Ecology and Management, WFA 4383 Wetland Ecology & Management, WFA 4393 Urban Wildlife Ecology, and WFA 4623 Conservation Biology.
34. In WFMG Concentration, changed FO 4353 Natural Resource Law to “Policy Elective (3)” to allow students to pick one of the course offerings that fulfills the Policy, Administration, and Law requirement for TWS. The Department of Forestry will maintain a list of approved electives that currently includes FO 4343 Forest Administration and Organiziation, FO

4353 Natural Resource Law, NREC 4423 Environmental Assessments, WFA 4353 Fish and Wildlife Policy and Law Enforcement, WFA 4363 Wildlife and Fisheries Administration and Communication, and WFA 4463 Human Dimensions of Fish & Wildlife Mgt.

Approved: **Date:**

Donald L. Grebner Digitally signed by Donald L. Grebner Date: 2023.04.10 11:22:09 -05'00'

Department Head

Leslie Burger Digitally signed by Leslie Burger Date: 2023.04.10 11:53:51 -05'00'

Chair, College or School Curriculum Committee

Dawn Ponykala - Dir Acad. Qual 4/11/23

L Wes Burger L Wes Burger 2023.04.17 09:04:37 -05'00'

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

DEGREE MODIFICATION OUTLINE FORM

All deleted courses and information are in *italics* and all new courses and information in **bold**.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science Major: Forestry Concentration: Environmental Concentration, Forest Business, Forest Management, *Forest Products*, Urban Forestry, Wildlife Management	Degree: Bachelor of Science Major: Forestry Concentration: Environmental Concentration, Forest Business, Forest Management, Urban Forestry, Wildlife Management
Old degree description: The forestry major is a science-based program leading to a Bachelor of Science degree in Forestry and consists of *six* concentrations: Environmental Conservation, Forest Management, *Forest Products*, Urban Forestry, Wildlife Management, and Forest Business Concentration. The Bachelor of Science degree in Forestry is accredited by the Society of American Foresters (SAF). *The Forest Products concentration is also accredited by the Society of Wood Science and Technology (SWST).* By combining a general education with specialized professional courses, the curriculum is designed to produce graduates who have skills in interpersonal communications, written and oral communications, and cultural understanding. Graduates of the major are qualified to become a Registered Forester in Mississippi after successfully completing an examination for this purpose with the Board of Registration for Foresters (BORF) in Mississippi. Graduates are also qualified to become Society of American Forester Certified Foresters if successfully completing an exam. Graduates are fully qualified as entry-level professionals and prepared for career advancement into positions of responsibility, while serving the current and future needs of society. The forestry major also prepares students for graduate school in any natural resource-related field.	New degree description: The forestry major is a science-based program leading to a Bachelor of Science degree in Forestry and consists of **five** concentrations: Environmental Conservation, Forest Management, Urban Forestry, Wildlife Management, and Forest Business Concentration. The Bachelor of Science degree in Forestry is accredited by the Society of American Foresters (SAF). By combining a general education with specialized professional courses, the curriculum is designed to produce graduates who have skills in interpersonal communications, written and oral communications, and cultural understanding. Graduates of the major are qualified to become a Registered Forester in Mississippi after successfully completing an examination for this purpose with the Board of Registration for Foresters (BORF) in Mississippi. Graduates are also qualified to become Society of American Forester Certified Foresters if successfully completing an exam. Graduates are fully qualified as entry-level professionals and prepared for career advancement into positions of responsibility, while serving the current and future needs of society. The forestry major also prepares students for graduate school in any natural resource-related field.
Old concentration description: <u>Environmental Conservation Concentration (FO/ENCO)</u> *Advisor: Dr. Heidi Renninger, Thompson Hall, room 313* Today's forestry professionals strive to balance commodity production with environmental conservation. This concentration is designed for students interested in focusing on complex environmental issues in the realm of natural resource management. While being educated as foresters, students concentrate on contemporary environmental concerns within three emphasis areas: social, land, and science. <u>Forest Business Concentration (FO/FOBN)</u> Advisor: Dr. Robert K. Grala, Thompson Hall, room 343 Designed for students interested in careers that emphasize business aspects of forestry such as timber markets, timber trade, timberland investment and insurance, forest real estate planning and investment, and timber procurement. Students	New concentration description: <u>Environmental Conservation Concentration (FO/ENCO)</u> **Advisor: Dr. Adam Polinko, Thompson Hall, room 359** Today's forestry professionals strive to balance commodity production with environmental conservation. This concentration is designed for students interested in focusing on complex environmental issues in the realm of natural resource management. While being educated as foresters, students concentrate on contemporary environmental concerns within three emphasis areas: social, land, and science. <u>Forest Business Concentration (FO/FOBN)</u> Advisor: Dr. Robert K. Grala, Thompson Hall, room 343 Designed for students interested in careers that emphasize business aspects of forestry such as timber markets, timber trade, timberland investment and insurance, forest real estate planning and investment, and timber procurement.

may select from a wide range of electives to meet specific career objectives. Depending on career objectives and learning interests, student will follow a carefully designed set of core courses and electives, and upon coursework completion will qualify for one of the following College of Business minors: accounting, business administration, business information systems, insurance, economics, entrepreneurship, finance, management, marketing, real estate, or business analytics.	Students may select from a wide range of electives to meet specific career objectives. Depending on career objectives and learning interests, student will follow a carefully designed set of core courses and electives, and upon coursework completion will qualify for one of the following College of Business minors: accounting, business administration, business information systems, insurance, economics, entrepreneurship, finance, management, marketing, real estate, or business analytics.
Forest Management Concentration (FO/FOMG) Advisor: Dr. Krishna Poudel, Thompson Hall, room 315	Forest Management Concentration (FO/FOMG) Advisor: Dr. Krishna Poudel, Thompson Hall, room 315
Designed for students who intend to pursue professional careers in forest land and timber management and use in both the public and private sectors. Students may select from a wide range of electives to meet specific career objectives; for example, emphasis in areas such as business, communications, and geographical information systems in forestry and related sciences.	Designed for students who intend to pursue professional careers in forest land and timber management and use in both the public and private sectors. Students may select from a wide range of electives to meet specific career objectives; for example, emphasis in areas such as business, communications, and geographical information systems in forestry and related sciences.
Forest Products Concentration (FO/FP) *Advisor: Dr. Joshua Granger, Thompson Hall, room 321* *The use of wood as a material requires a fundamental understanding of wood properties, manufacturing processes, and the marketing of wood products. Students are prepared for positions in wood manufacturing, marketing, and research. Employers include lumber, pulp and paper mills, furniture manufacturers, and retail marketers of wood materials.*	
Urban Forestry Concentration (FO/URBN) *Advisor: Dr. Stephen C. Grado, Thompson Hall, room 357*	Urban Forestry Concentration (FO/URBN) **Advisor: Dr. Ashley Schulz, Thompson Hall, room 327**
Addresses an emerging need for the management of trees in towns and cities, and the urban/wildland interface. Urban and community foresters manage trees along city streets, in municipal parks, private woodlots, and utility right-of-ways. Employers include federal, state, and municipal governments, private consultants, and industry.	Addresses an emerging need for the management of trees in towns and cities, and the urban/wildland interface. Urban and community foresters manage trees along city streets, in municipal parks, private woodlots, and utility right-of-ways. Employers include federal, state, and municipal governments, private consultants, and industry.
Wildlife Management Concentration (FO/WFMG) Advisor: Dr. Austin Himes, Thompson Hall, room 353	Wildlife Management Concentration (FO/WFMG) Advisor: Dr. Austin Himes, Thompson Hall, room 353
Designed for students interested in careers that emphasize wildlife management within the context of multiple-use management of forest land. The concentration fulfills course requirements for certification as wildlife biologists by The Wildlife Society. Many graduates of this concentration undertake graduate studies in wildlife biology and related areas to qualify for entry-level positions as wildlife biologists.	Designed for students interested in careers that emphasize wildlife management within the context of multiple-use management of forest land. The concentration fulfills course requirements for certification as wildlife biologists by The Wildlife Society. Many graduates of this concentration undertake graduate studies in wildlife biology and related areas to qualify for entry-level positions as wildlife biologists.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
General Education <u>English:</u> EN 1103 English Composition I Or EN 1104 Expanded English Composition I EN 1113 English Composition II Or EN 1173 Accelerated Composition II	6	General Education <u>English:</u> EN 1103 English Composition I Or EN 1104 Expanded English Composition I EN 1113 English Composition II Or EN 1173 Accelerated Composition II	6
<u>Fine Arts (General Education):</u> Any General Education Course	3	<u>Fine Arts (General Education):</u> Any General Education Course	3
<u>Natural Sciences (2 labs required from Gen Ed):</u> BIO 1134 Biology I BIO 1144 Biology II See concentrations for additional requirements.	8	<u>Natural Sciences (2 labs required from Gen Ed):</u> BIO 1134 Biology I BIO 1144 Biology II See concentrations for additional requirements.	8
<u>Extra Science (Chemistry):</u> *CH 1043 Survey of Chemistry* *Physical Science Elective (3)* *or PH 1113 General Physics*[1] [1]*Applies only to students who select the Forest Products Concentration.*	*6*	<u>Extra Science (Chemistry):</u> **CH 1043 Survey of Chemistry I** **Or CH 1213 Chemistry I**	**3**
<u>Math</u> <u>(General Education):</u> *See Concentration (3)* ST 2113 Intro to Statistics or BQA 2113 (Business Statistical Methods)[2] [2]Applies only to students who select the Forest Business Concentration and whose business minor includes a business statistics course. In other cases, students will take ST 2113.	*6*	**<u>Quantitative Reasoning</u>** <u>(General Education)</u>: ST 2113 Intro to Statistics **or ST 3123 Intro to Stat. Inf** or BQA 2113 (Business Statistical Methods)[1] **[1]Accepted for all concentrations but required for Forest Business Concentration.**	**3**
<u>Humanities (General Education):</u> Any General Education course.	6	<u>Humanities (General Education):</u> Any General Education course.	6
<u>Social/Behavioral Sciences (Gen Ed):</u> *AEC 2713 Intro to Food and Resource Econ* FO 4113 Forest Resource Economics	6	<u>Social/Behavioral Sciences (Gen Ed):</u> **AEC 2713 Intro to Food and Resource Econ** **Or EC 2113 Macroeconomics** **Or EC 2123 Macroeconomics** FO 4113 Forest Resource Economics	6
<u>Oral Communication:</u> CO 1003 Fund. Of Public Speaking	3	<u>Oral Communication:</u> CO 1003 Fund. Of Public Speaking **Or CO 1013 Intro to Communication**	3
<u>Writing:</u> *AELC 3203 Prof. Wri in Ag, NR & Hu Sci*	3	<u>Writing:</u> **Technical Writing Elective (3)**	3
<u>Subtotal</u>	*47*	<u>Subtotal</u>	**41**
Major Core Courses[2]: EPP 3124 Forest Pest Management FO 1101 Forest Resource Survey FO 2113 Dendrology FO 2213 Forest Measurements FO 3012 Intro to Forest Communities	 4 1 3 3 2	Major Core Courses[2]: EPP 3124 Forest Pest Management FO 1101 Forest Resource Survey FO 2113 Dendrology FO 2213 Forest Measurements FO 3012 Intro to Forest Communities	 4 1 3 3 2

FO 3015	Forest Descript. and Analysis	5	FO 3015	Forest Descript. and Analysis	5
FO 3103	Computer Appl. For. Res.	3	FO 3103	Computer Appl. For. Res.	3
FO 4113	Forest Resource Economics[3]	-	**FO 3123**	**Tree Physiology**	**3**
FO 4123	Forest Ecology	3	FO 4113	Forest Resource Economics[3]	-
FO 4213	Forest Biometrics	3	FO 4123	Forest Ecology	3
FO 4221	Practice of Silviculture Lab	1	FO 4213	Forest Biometrics	3
FO 4223	Practice of Silviculture	3	FO 4221	Practice of Silviculture Lab	1
FO 4231	Intro to Wood Supply Systems	1	FO 4223	Practice of Silviculture	3
FO 4233	For. Op. and Harv.	3	FO 4231	Intro to Wood Supply Systems	1
FO 4313	Spatial Tech. in Nat. Res.	3	FO 4233	For. Op. and Harv.	3
FO 4323	For. Res. Mgt.	3	FO 4313	Spatial Tech. in Nat. Res.	3
FO 4413	Natural Res. Policy	3	FO 4323	For. Res. Mgt.	3
FO 4423	Prof. Practice	3	FO 4413	Natural Res. Policy	3
PSS 3303	Soils	3	FO 4423	Prof. Practice	3
WFA 3031	Intro to Wild. and Fish. Prac.	1	**GR 1113**	**Physical Geography**	**3**
WFA 4153	Prin. Wildlife Cons. and Mgt.	3	PSS 3303	Soils	3
			WFA 3031	Intro to Wild. and Fish. Prac.	1
			WFA 4153	Prin. Wildlife Cons. and Mgt.	3
	Subtotal	*54*		Subtotal	**60**
[2]Pre-requisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student's responsibility to be aware of pre-requisites and co-requisites identified in the Course Description section of the Bulletin.			**[2]** Pre-requisites and co-requisites are strictly enforced in the College of Forest Resources. It is the student's responsibility to be aware of pre-requisites and co-requisites identified in the Course Description section of the Bulletin.		
[3] FO 4113 is also used concurrently to meet university social/behavioral sciences requirement.			**[3]** FO 4113 is also used concurrently to meet university social/behavioral sciences requirement.		
Concentration Courses:			Concentration Courses:		
Courses to be taken in addition to forestry major core curriculum include:			Courses to be taken in addition to forestry major core curriculum include:		
Environmental Conservation Concentration (FO/ENCO)			Environmental Conservation Concentration (FO/ENCO)		
Advisor: Dr. Heidi Renninger, Thompson Hall, room 313			**Advisor: Dr. Adam Polinko, Thompson Hall, room 359**		
		-			
MA 1313 College Algebra[1]		3	FO 3113 Forest Recreation Mgt.		3
FO 3113 Forest Recreation Mgt.		3	**Geospatial Elective (3)[1]**		3
WFA 3133 Applied Ecology		*3*	FO 4463 Forest Hydro & Watershed Mgt.		3
FO 4453 Remote Sensing Appl.		3	**FO 4483 Forest Soils**		**3**
FO 4463 Forest Hydro & Watershed Mgt.		*14*	**Professional Elective (12)[1]**		**12**
Emphasis Elective (14)[2]			**Free Elective (3)**		**3**
[1]MA 1313 is also used concurrently to meet university math requirement. Three credit hours are counted in general education subtotal.					
[2]Electives are selected from the list of electives approved by the Department of Forestry faculty.			**[1]**Electives are selected from the list of electives approved by the Department of Forestry faculty.		
	Subtotal	*26*		Subtotal	**27**
	Curriculum Total	*127*		Curriculum Total	**128**

Forest Business Concentration (FO/FOBN) Advisor: Dr. Robert K. Grala, Thompson Hall, room 343		Forest Business Concentration (FO/FOBN) Advisor: Dr. Robert K. Grala, Thompson Hall, room 343	
MA 1313 College Algebra[1] *SBP 1103 Intro to Sustainable Bioproducts* FO 3113 Forest Recreation Mgt. Business Elective from the College of Business (from 15 to 21 credit hours depending on a selected business minor)[2]	- *3* 3 21	FO 3113 Forest Recreation Mgt. Business Elective from the College of Business (from 15 to 21 credit hours depending on a selected business minor)[2] **Free Elective (3)**	3 21 **3**
[1]MA 1313 is also used concurrently to meet university math requirement. Three credit hours are counted in general education subtotal.			
[2]If a business minor has a course load less than 21 credit hours required by a minor in business administration (e.g. 18 credit hours required by a minor in finance), a student will substitute the difference in credit hours by enrolling in an additional forest business elective[3]. If a business minor requires less than 18 credit hours (e.g. 15 credit hours required by a minor in real estate), a student will substitute the difference in credit hours by enrolling in an additional forest business elective first and then enrolling in professional electives to maintain the program total of 128 credits hours.		**[1]**If a business minor has a course load less than 21 credit hours required by a minor in business administration (e.g., 18 credit hours required by a minor in finance), a student will substitute the difference in credit hours by enrolling in an additional forest business elective[3]. If a business minor requires less than 18 credit hours (e.g., 15 credit hours required by a minor in real estate), a student will substitute the difference in credit hours by enrolling in an additional forest business elective first and then enrolling in professional electives to maintain the program total of 128 credits hours.	
[3]Electives are selected from the list of electives approved by the Department of Forestry faculty.		**[2]**Electives are selected from the list of electives approved by the Department of Forestry faculty.	
Subtotal Curriculum Total	27 128	Subtotal Curriculum Total	27 128
Forest Management Concentration (FO/FOMG) Advisor: Dr. Krishna Poudel, Thompson Hall, room 315		Forest Management Concentration (FO/FOMG) Advisor: Dr. Krishna Poudel, Thompson Hall, room 315	
MA 1313 College Algebra[1] SBP 1103 Intro to Sustainable Bioproducts FO 3113 Forest Recreation Mgt. *Business/Science Elective (9)*[2] *Professional Elective (9)*[2] *Free Elective (3)*[2]	- 3 3 *9* *9* *3*	SBP 1103 Intro to Sustainable Bioproducts FO 3113 Forest Recreation Mgmt. **FO 3203 Forest Fire** **FO 4253 Timber Procurement** **Geospatial Elective (3)[1]** **Ecosystem Service Elective (3) [1]** Professional Elective (**6**) **[1]** **Free Elective (3)**	3 3 **3** **3** **3** **3** **6** **3**
[1]MA 1313 is also used concurrently to meet university math requirement. Three credit hours are counted in general education subtotal.			
[2]Electives are selected from the list of		**[1]**Electives are selected from the list of electives	

electives approved by the Department of Forestry faculty.		approved by the Department of Forestry faculty.	
Subtotal	27	Subtotal	27
Curriculum Total	128	Curriculum Total	128
Forest Products Concentration (FO/FP)			
Advisor: Dr. Joshua Granger, Thompson Hall, room 321			
MA 1613 Calculus for Business and Life Sciences I OR	-		
MA 1713 Calculus I1			
SBP 1103 Intro to Sustainable Bioproducts	*3*		
CH 1053 Survey of Chemistry II	*3*		
SBP 4013 Wood Anatomy	*3*		
SBP Processing Elective (3)2	*3*		
SBP Elective (12)2	*12*		
SBP 3113 Biomaterial Phy. and Mechanics	*3*		
1MA 1613 OR MA 1713 is also used concurrently to meet university math requirement. Three credit hours are counted in general education subtotal.			
2Electives are selected from the list of electives approved by the Department of Forestry faculty.			
Subtotal	*27*		
Curriculum Total	*128*		
Urban Forestry Concentration (FO/URBN)		Urban Forestry Concentration (FO/URBN)	
Advisor: Dr. Stephen C. Grado, Thompson Hall, room 357		**Advisor: Dr. Ashley Schulz, Thompson Hall, room 327**	
MA 1313 College Algebra[1]	-		
PS 1113 American Government	3	PS 1113 American Government	3
PSS 2423 Plant Materials I	3	PSS 2423 Plant Materials I	3
PSS 3473 Plant Material II	3	PSS 3473 Plant Material II	3
PSS 4353 Arboricul. and Landsc. Mainten.	3	PSS 4353 Arboricul. And Landsc. Mainten.	3
LA 3623 Urban Planning	3	LA 3623 Urban Planning	3
REF 3333 Principles of Real Estate	3	FO 3113 Forest Recreation Mgt.	3
FO 3113 Forest Recreation Mgt.	3	**Geospatial Elective (3)[1]**	3
FO 4473 GIS Nat Res Mgt	*3*	FO 4683 Intro Urban Community Forestry	3
FO 4683 Intro Urban Community Forestry	3	**Free Elective (3)**	**3**
[1]MA 1313 is also used concurrently to meet university math requirement. Three credit hours are counted in general education subtotal.		**[1]Electives are selected from the list of electives approved by the Department of Forestry faculty.**	
Subtotal	27	Subtotal	27
Curriculum Total	128	Curriculum Total	128

Wildlife Management Concentration (FO/WFMG) Advisor: Dr. Austin Himes, Thompson Hall, room 353		Wildlife Management Concentration (FO/WFMG) Advisor: Dr. Austin Himes, Thompson Hall, room 369	
MA 1313 College Algebra[1]	-	WFA 4243 Wildlife Techniques	3
FO 3213 Tree Physiology OR	*3*	**Policy Elective (3)** [1]	3
BIO 4214 General Plant Physiology OR		**Wildlife Biology Elective (3)**[1]	3
WFA 4223 Wildlife Plant Identification OR		**Wildlife Management Elective (3)** [1]	3
BIO 4203 Taxonomy of Spermatophytes		**Zoology Elective (3)**[1]	3
WFA 3133 Applied Ecology	*3*	Professional Elective **(9)**[1]	**9**
Professional Elective (3)[2]	*3*	**Free Elective (3)**	**3**
BIO 3524 Biology of Vertebrates	*4*		
WFA 4433 Mammalogy	3		
WFA 4443 Ornithology	*3*		
FO 4353 Natural Resource Law	*3*		
WFA 4243 Wildlife Techniques	3		
[1]*MA 1313 is also used concurrently to meet university math requirement. Three credit hours are counted in general education subtotal.*			
[2]Electives are selected from the list of electives approved by the Department of Forestry faculty.		[1]Electives are selected from the list of electives approved by the Department of Forestry faculty.	
Subtotal	*25*	Subtotal	**27**
Curriculum Total	*126*	Curriculum Total	**128**

JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The changes within this document reflect a careful consultation by the Department of Forestry Undergraduate Curriculum Committee with the College of Forest Resources (CFR) Student Services Coordinator, our accreditation standards through the Society of American Forestry, and Undergraduate Coordinators in other CFR departments.

The addition of FO 3123 Tree Physiology to the Major Core Courses reflects the recent development of that course in our department, the popularity of the course among our students, and the clear importance it is to a general degree in Forestry. The Forest Products Concentration was deleted from our Forestry major because the Department of Sustainable Bioproducts has reinstituted their undergraduate degree and there is no longer a need for our concentration (see attached letter of support). In the Environmental Conservation and the Forest Management Concentrations we added several FO required courses and reduced the number of Professional Electives based upon feedback from our Advisory Board and their assessment of skills our graduates need entering the workforce. With consultation from the Department of Wildlife, Fisheries & Aquaculture, we have eliminated WFA 3133 Applied Ecology as a required course in several of our concentrations such that FO students will only take FO 4123 Forest Ecology.

Many of the changes in the document reflect a reorganization of our curricula and elective options to support easier navigation of courses that are available to our students to complete their degree in Forestry. The new electives categories provide an option of courses, in contrast to prescribing a single course, to meet targeted curriculum objectives and areas of competence for our degree certification by the Society of American Foresters. Additionally, we have revised the number of credit hours within the elective categories, especially Professional Electives to be divisible by three. This simultaneously allows us to make sure all concentrations are taking the same number of concentration-credit hours and that the total curriculum hours are the same across all concentrations. Previously, the inconsistent number of credit hours across concentrations resulted in technological challenges of degree auditing within the CFR and in the Registrar's Office. Thus, these changes will ease the administrative burden and provide accurate information in CAPP/Degree Works.

1. Will this program change meet local, state, regional, and national educational and cultural goals? **This program change aligns with SAF accreditation standards for Forestry, under which the FO program is currently accredited.**
2. Will this program change result in duplication in the System? **No, in fact this program change will remove the overlap between the Forestry-Forest Products Concentration and the reinstated undergraduate degree in Sustainable Bioproducts.**
3. Will this program change/advance student diversity within the discipline? **No, not directly.**
4. Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the US? **It is anticipated that this change will make our graduates more prepared to enter professional forestry careers. In our proposed changes, we have developed a more focused set of courses to provide students with more refined areas of expertise within their concentration. For example, FO 3203 Forest Fire is now a required course in the Forest Management Concentration. This is a direct result of conversations with our Advisory Board and the growing need for wildfire/prescribed fire professionals.**
5. Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the US? **For the reasons stated above in #4, it is anticipated that our students will be more qualified in the areas of their respective concentrations and therefore garner higher starting salaries.**

EFFECTIVE DATE
8/15/2023

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF FORESTRY
P. O. Box 9681
Mississippi State, MS 39762
P. 662.325.2949
cfr.msstate.edu

MEMO TO: Dr. Andy Perkins, Chair
University Committee on Courses and Curricula (UCCC)

FROM: Dr. Courtney Siegert, Chair, Department of Forestry Undergraduate Curriculum Committee (UGCC)

DATE: March 29, 2023

SUBJECT: NREC Special Topic Course Proposals

As per UCCC policy, I am providing documentation that the Department of Forestry's UGCC has reviewed and approved the following items:

1. Degree Modification Proposal – Forestry Major
2. Degree Modification Proposal – NREC Major

The UGCC members have indicated below their approval (or disapproval) of these modifications and course proposals. All Committee members approved the documents that were developed and submitted. The faculty also voted in support of these changes.

	Approve	Disapprove	Signature
Stephen Grado	✔		Dr. Stephen C. Grado — Digitally signed by Dr. Stephen C. Grado DN: cn=Dr. Stephen C. Grado, o=MSU, ou=CFR/FWRC, email=scg4@msstate.edu, c=US Date: 2023.04.10 10:04:51 -05'00'
Robert Grala	✔		Dr. Robert K. Grala — Digitally signed by Dr. Robert K. Grala Date: 2023.04.05 09:08:15 -05'00'
Joshua Granger	✔		Joshua J. Granger — Digitally signed by Joshua J. Granger Date: 2023.04.06 20:20:08 -05'00'
Austin Himes	✔		Austin Himes — Digitally signed by Austin Himes Date: 2023.03.29 13:55:55 -05'00'
Krishna Poudel	✔		Krishna P. Poudel — Digitally signed by Krishna P. Poudel Date: 2023.03.29 14:09:41 -05'00'
Heidi Renninger	✔		Heidi Renninger — Digitally signed by Heidi Renninger Date: 2023.03.29 14:06:15 -05'00'
Courtney Siegert	✔		Courtney Siegert — Digitally signed by Courtney Siegert Date: 2023.04.07 06:31:45 -05'00'
Changyou Sun	✔		Digitally signed by Changyou Sun Date: 2023.04.04 11:13:23 -05'00'
Yun Yang	✔		Yun Yang — Digitally signed by Yun Yang Date: 2023.04.04 09:07:45 -05'00'

MISSISSIPPI STATE UNIVERSITY

College of Forest Resources
Department of Sustainable Bioproducts

P.O. Box 9820
201 Locksley Way
Mississippi State, MS 39762

P. 662.325.5811
F. 662.325.8126
www.cfr.msstate.edu/bioproducts

13 January 2023

Dr. Siegert,

The Department of Sustainable Bioproducts (formerly Department of Forest Products) fully supports the decision by the Department of Forestry to eliminate the Forest Products concentration within the Forestry curriculum. We agree that this concentration served its intended purpose, and with the introduction of the Sustainable Bioproducts curriculum in 2014 and the currently proposed adjustments to the Forestry curriculum, it is no longer necessary.

We are excited to host any students who may have entered this concentration within our undergraduate cohort, and to continue to offer courses to all CFR students with an interest in structural products, protection, materials science, engineered wood, and related disciplines.

Regards,

C. Elizabeth Stokes, Ph.D.
Sustainable Bioproducts Undergraduate Program Coordinator

cc: Rubin Shmulsky, Ph.D.
Department head and Professor

cc: Jason T. Street, Ph.D.; Frank C. Owens, Ph.D.
Sustainable Bioproducts Undergraduate Curriculum Committee