

## MISSISSIPPI STATE UNIVERSITY DATA SCIENCE ACADEMIC INSTITUTE

Computational Agriculture and Natural Resources

Year One							
Fall Semester			Spring Semester				
EN	1103	English Composition I		EN	1113	English Composition II	
MA	1713	Calculus I		MA	1723	Calculus II	
CSE	1284	Intro to Programming		CSE	1384	Intermediate Programming	
DSCI	2013	Data Science Literacy		DSCI	2012	Data Wrangling Lab	
		Lab Based Science				Lab Based Science	

	Year Two							
	Fall Semester			Spring Semester				
MA	2733	Calculus III	1	MA	3123	Statistical Inference		
CSE	2813	Discrete Structures		CSE	2383	Data Structures & Analysis of Algorithms		
DSCI	3013	Data Acquisition		DSCI	4013	Data Visualization		
BIS	3233	Management Information Systems		PHI	1113	Intro to Logic		
		Humanities	]			Fine Art		
			]					

	Year Three							
	Fall Semester		Spring Semester					
MA	3113 Intro to Linear Algebra	MA	4523 Intro to Probability					
CSE	4633 Artificial Intelligence	CSE	4503 Database Management Systems					
DSCI	3022 Data Visualization Lab	DSCI	3012 Description, Analysis & Inference Lab					
	Public Speaking Course		Written Communication Course					
	Social/Behavioral Science		Choice of Forest Resources Course					
	Choice of Agriculture Course		1 of 2 Concentration Courses					

Year Four							
Fall Semester				Spring Semester			
CSE	3763	Legal & Ethical Issues in Computing		DSCI	2022	Cloud, Quantum & High Perf Computing Lab	
DSCI	3032	Artificial Intelligence Lab				2 of 4 Applied Courses	
		2 of 2 Concentration Courses				3 of 4 Applied Courses	
		1 of 4 Applied Courses				4 of 4 Applied Courses	
DSCI	4553	Senior Capstone One		DSCI	4663	Senior Capstone Two	

Updated 06/2024

## Agriculture Course (Choose 1)

AEC 2713 Intro to Food and Resource Economics ABE 1863 Engineering Technology in Agriculture BCH 4013 Principles of Biochemistry PSS 1313 Plant Science ADS 1113 Animal Science

## Concentration Course List (Choose 2)

EC 2113 Principles of Macroeconomics EC 3123 Intermediate Microeconomics AEC 2223 Introduction to Sustainability Economics AEC 3133 Introductory Agribusiness Management AEC 3233 Intro to Environmental Economics and Policy AEC 4123 Financial and Commodity Futures Marketing ABE 2173 Prin. of Agricultural and Off-Road Machines ABE 2543 Precision Agriculture I ABE 4543 Precision Agriculture II BCH 3102 Essential Biochemical Concepts and Analysis BCH 4414 Protein Methods ADS 3013 Anatomy and Physiology ADS 3313 Introduction to Meat Science SBP 2012 Intro to Bioproducts Industries SBP 2123 Mat. & Processing of Structure Bioproducts WFA 4313 Fisheries Management WFA 4613 Landscape Ecology FO 2213 Forest Measurements FO 2443 Essentials of Biotechnology FO 4113 Forest Resource Economics FO 4123 Forest Ecology

Forest Resources Course List (Choose 1) SBP 1103 Introduction to Sustainable Bioproducts WFA 3133 Applied Ecology FO 4123 Forest Ecology

## Applied Course List (Choose 4) AEC 4133 Analysis of Food Markets and Prices AEC 4223 Applied Quantitative Analysis in Ag Economics AEC 4363 Economics of Precision Agriculture AEC 4413 Public Problems of Agriculture AEC 4733 Econometric Analysis in Agricultural Economics ABE 2873 Land Surveying ABE 3513 The GPS and GIS in Ag and Engineering ABE 4163 Machine Management Agro-Ecosystems ABE 4263 Soil and Water Management ABE 4463 Introduction to Imaging in Biological Systems ABE 4483 Introduction to Remote Sensing Technologies BCH 4803 Integrative Protein Evolution PSS 4483 Introduction to Remote Sensing Technologies ADS 4523 Internet Based Mgmt in Livestock Industries SBP 4013 Wood Anatomy SBP 4253 Quantitative Methods in SBP WFA 4123 Wildlife and Fisheries Biometrics WFA 4243 Wildlife Techniques WFA 4253 App of Spatial Tech to Wildlife Fisheries Mgmt FO 3015 Forest Description and Analysis FO 4213 Forest Biometrics FO 4313 Spatial Tech in Natural Resources Management FO 4453 Remote Sensing Applications

FO 4473 GIS for Natural Resource Management