Gondwana University, Gadchiroli.
NEP-2020 P.G. Programme (From Session 2023-2024)

FACULTY NAME- SCIENCE AND TECHNOLOGY

Sr. No.	Name of Programme	Sem.	Major (Mandatory) (04x3= 12 Credits)	Elective (Any One) (04 Credits)	Research Methodology/ On Job Training /Field Project (OJT/FP) (04 Credits)
1	M.SC. BOTONY	I	1. General Microbiology, Phycology and Mycology	4. Molecular Biology and Plant Biotechnology-I	5. Research Methodology
2			2. Bryophytes & Pteridophytes	4. Reproductive Biology of Angiosperms-I	
3			3. Gymnosperm & Paleobotany	4. Paleobotany-I	
4				4.Advance Phycology- I	
5				4.Mycology and Plant Pathology -I	
6	M.SC. BOTONY	II	1. Plant Physiology	4. Molecular Biology and Plant Biotechnology-II	5. OJT
7			2. Plant Development & Embryology	4. Reproductive Biology of Angiosperms-II	
8			3. Angiosperm-I	4. Paleobotany-II	
9				4. Advance Phycology-II	
10				4. Mycology and Plant Pathology -II	
11	M.SC. CHEMISTRY	I	1. Inorganic Chemistry - I	4. Analytical Chemistry - I	5. Research Methodology
12			2. Organic Chemistry - I	4. Industrial Chemicals And Environment	
13			3. Physical Chemistry -I	4. Green Chemistry	
15				4. Pharmaceutical and Cosmetic Chemistry	

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16	M.SC. CHEMISTRY	II	1. Inorganic Chemistry - II	4.Analytical Chemistry - II	5. OJT/FP
17			2. Organic Chemistry- II	4. Inorganic Materials of Industrial Importance	
18			3. Physical Chemistry - II	4. Polymer Chemistry	
19				4. Molecular Spectroscopy	
20				4. Frontiers in Electrochemistry	
21	M.SC. COMPUTER SCIENCE	I	1) Scripting Languages and Information Retrieval	4) Cloud Computing	5. Research Methodology
22			2) Python Programming	4) Discrete Mathematics	
23			3) Advanced Java	4) Theory of Computation & System Programming	
24				4) Network Security	
25				4) Computer Graphics	
26	M.SC. COMPUTER SCIENCE	II	1) Web Designing using ASP.Net	4) Cyber Security & IPR	5) Field Project
27			2) Data Warehouse and SQL	4) Soft Skills	
28			3) Android Application Development	4) Digital And Cyber Forensic	
29				4) Operation Research	
30				4) Data Visualization	

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31	M.SC. ELECTRONICS	I	1. Semiconductor Devices and Electronic Circuits	4. Virtual Instrumentation	5. Research Methodology
32			2. Analog and Digital System	4. Embedded Systems and Applications	
33			3. Advanced Microprocessors	4. Communication Techniques and Networking	
34	M.SC. ELECTRONICS	II	1. Computer Organization and Interfacing	4. Internet of Things	5. OJT
35			2. Microwave and Optical Communication	4. Digital signal Processing	
36			3. Fuzzy Logic and Artificial Neural Networks	4. Digital Image Processing	
37	M.SC. ENVIRONMENTAL SCIENCE	I	1. Fundamentals of Environmental Science	4. Environmental Pollution,	5. Research Methodology
38			2. Chemical aspects of environmental science	4. Fundamentals of Atmospheric Science	
39			3. Ecology	4. Physical Environment,	
40				4. Elements of climate science	
41				4. Freshwater Ecology	
42	M.SC. ENVIRONMENTAL SCIENCE	II	1. Environmental Sampling and Analysis	4. Microbiological aspects of environment (4),	5. OJT
43			2. Natural Resources: Conservation and Management	4. Environmental Toxicology	
44			3. Analytical Techniques for Environmental Monitoring	4. -Forest Ecology	
45				4. Environmental Issues and Solutions,,	
46				4. -Environmental Sustainability	

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47	M.SC. GEOLOGY	I	1. Mineralogy and Crystallography	4. Stratigraphy and Indian Geology	5. Research Methodology
48			2. Igneous Petrology	4. Coal Geology	
49			3. Metamorphic Petrology and Geological Mapping	4. Environmental Hydrogeology	
50				4. Industrial Geology	
51				4. Petroleum Geology	
52	M.SC. GEOLOGY	II	1. Sedimentology, Geostatistics and Computer Application in Geology	4. Structural Geology, Geodynamics and Tectonics	5. Field Project In Geology OR On Job Training with various Geological Organization.
53			2. Paleontology and Applied Paleobiology	4. Basin analysis and Sequence Stratigraphy	
54			3. Geochemistry and Instrumentation Techniques	4. Exploration Geochemistry	
55				4. Applied and Industrial Micropaleontology	
56				4.Elements of Mining and Drilling Techniques	
57	M.SC. MATHEMATICS	I	1 Advanced Abstract Algebra	4. Numerical Analysis	5. Research Methodology
58			2 Topology	4. Real Analysis	
59			3 Linear Algebra	4. Ordinary differential Equations	
60				4. Calculus of Variations	
61				4. Number Theory	
62				4. SCILAB Programming	

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63				4. Fuzzy Mathamatics	
				4. Logic & Set Theory	
64				4. Elementary Discrete Mathamatics	
65			1 Field theory	4. Operations Research	
66			2 Measure theory	4. Differential Geometry	
67			3 Classical Mechanics	4. Advanced Topics in Topology	
68				4. Graph Theory	
69	M.SC. MATHEMATICS	II		4. Cryptography	5. OJT- Financial Mathematics
70				4. Combinatorics	
71				4. Coding Theory	
				4. Statastics and Probability	
72				4. C Programming	
73			1 Microbial diversity and evolution	4. Microbial Physiology & Metabolism	
74			2 Enzymology and Techniques	4. Principles of Microbiology	
75	M.SC. MICROBIOLOGY	I	3 Commercial Microbiology	4. Pharmaceutical Microbiology	5. Research Methodology
76				4. Advanced Microbiology	
77				4. Agriculture, Food and Dairy Microbiology	

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78	M.SC. MICROBIOLOGY	II	1. Advance Techniques in Microbiology	4. Microbial Methods for environment management	5. OJT
79			2. Membrane structure and signal transduction	4. Biosepty and IPR	
80			3. Microbiological Testing of industrial products	4. Microbial Biotechnology	
81				4. Microbial Enzyme Technology	
82				4. Microbes in sustainable agriculture and Dvelopment	
83	M.SC. ZOOLOGY	I	1) Structure and function of invertebrates	4. Bioinstrumentation Bioinformatics and Biostatics	5. Research Methodology
84			2) General Physiology	4. Environmental Science and Basic concept of Ecology	
85			3) Cell biology and Genetics	4. Ecology and Environmental Pollution	
86				4. Medical Laboratory Techniques	
87				4. Basic limnology	
88	M.SC. ZOOLOGY	II	1) Structure and function of vertebrates	4. Biology of Parasites	5. Industrial Training/ Survey/ Research Project
89			2) Comparative Endocrinology	4. Aquacultural and Management	
90			3) Molecular Biology and Bio-Technolgy	4. Applied Entomology	
91				4. General And Applied Ichyology	

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92				4. Economic Zoology	
93	M.SC. BIOTECHNOLOGY	I	1 Cell Biology	4. Molecular Biology,	5. Research Methodology
94			2 Microbiology	4. Advanced Environmental Biotechnology ,	
95			3 Biophysical techniques	4. Environmental Microbiology & Waste Management	
96				4. Microbial Technology ,	
97				4. Virology ,	
98	M.SC. BIOTECHNOLOGY	II	1. Enzymology	4. Industrial Biotechnology,	5. OJT
99			2. Immunology & Immunological Techniques	4. Advanced Plant & Agricultural Biotechnology ,	
100			3. Molecular Biology & Bioinformatics	4.Medical Biotechnology,	
101				4. Food & Dairy Biotechnology,	
102				4. Pharmacuetical Biotechnology	
103	M.SC. PHYSICS	I	1. Semiconductor Physics and Devices	4. Complex Analysis and Numerical Methods	5. Research Methodology
104			2. Electrodynamics	4. Astrophysics	
105			3. Mathematical Physics	4. Energy Physics	
106				4. Introduction to Python	
107				4. Biophysics	
108	M.SC. PHYSICS	II	1. Fundamentals of Quantum Mechanics	4. Advanced Optoelectronics	5. OJT
109			2. Solid State Physics	4. Plasma Physics and Space Science	
110			3. Classical and Statistical Mechanics	4. Practical Electronics	
111				4. Medical Physics	
112				4. Data Science	