



Gondwana University, Gadchiroli.

Revised Basket

NEP 2020 P.G. PROGRAMME SESSION 2024-25 Programme Name - M.Sc. Sem-III & IV

Faculty Name : Science and Technology		Name : Computer Science
Two Years Regular Post Graduate Program		
SEM - III		
Major (Mandatory)	Elective	Research Project
1 Software Testing and Quality Assurance	4 Natural Language Processing	5. Research Project
2 Artificial Intelligence and Robotics	4. Machine Learning	
3 Big Data Analytics	4. Internet of Things (IoT)	
	4. High-Performance Computing	
	4. Computer Vision	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Data Science	4. Advanced Cryptography	5. Research Project
2 Advanced Web Development Using PHP	4. Embedded System	
	4. Advanced Computer Networks	
	4 R Programming	
	4. Web Analytics	
	Note:- Student shall select any one from above	
Gondwana University, Gadchiroli.		
Faculty Name : Science and Technology		Name : Bio- Technology
Two Years Regular Post Graduate Program		

SEM - III		
Major (Mandatory)	Elective	Research Project
1 Animal Bio-technology	4 .Applied Bio-Technology	5. Research Project
2 Plant Bio-technology	4. Molecular Diagnostics	
3 Genetics Engeering	4. Clinical trial and Research	
	4 .Phytosecondary Metabolite and its Bioactivity	
	4.Genomics and Protomics	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Environmental Bio-technology	4. Ethics, patenting and bio- entrepreneurship and	5. Research Project
	4. Nanobiotechnology	
2 Applied Enviornmental Bio- technology and Ecology	4. Cancer Biology	
	4. DNA Fingerpriting	
	4. Molecular Basic of Drug Discovery	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology			Name : Zoology
Two Years Regular Post Graduate Program			
SEM - III			
Major (Mandatory)	Elective	Research Project	
1 Parasitology and Immunology	4. Fish and Fisheries- I		
2. Animal Physiology	4. Mammalian Reproductive Physiology - I		

3 Ecology and Environmental Biology	4. Fresh Water Zoology - I	5. Research Project
	4. Industrial Entomology - I	
	4. Applied Fresh Water Fisheries - I	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Evolution and Genatics	4. Fish and Fisheries- II	5. Research Project
2 Developmental Biology	4. Mammalian Reproductive Physiology - II	
	4. Fresh Water Zoology - II	
	4. Industrial Entomology - II	
	4. Applied Fresh Water Fisheries - II	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Environmental Science

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1 Water Treatment and Supply	4. Solid and Hazardous Waste Management	5. Research Project
	4. Fundamentals of Environmental Science	
2 Wastewater Treatment	4. Ecology	
	4. Atmosphere and Global Climate Change	
3 Air Pollution control	4. Land and Soil Conservation	
	Note:- Student shall select any one from above	
SEM - IV		

Major (Mandatory)	Elective	Research Project
1 EIA and Environmental Laws	4. Conflict and Management	5. Research Project
	4. Sustainable Environment	
2 Pollution control and Industrial safety	4. Green Technologies	
	4. Climate change, adaptation and mitigation	
	4. Urban forestry and management	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Botany

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1 Angiosperm-II	4. Molecular Biology and Plant Biotechnology-III	5. Research Project
	4. Reproductive Biology and Angiosperm - III	
2 Cytology & Genetics	4. Paleobotany-III	
	4. Advanced Phycology-III	
3 Plant Biochemistry	4. Mycology Plant Pathology-III	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Plant Ecology	4. Molecular Biology and Plant Biotechnology-IV	5. Research Project
	4. Reproductive Biology and Angiosperm-IV	
2 Plant Breeding and Biostatics	4. Paleobotany-IV	
	4. Advanced Phycology-IV	
	3 4. Mycology Plant Pathology-IV	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Electronics

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1. Electromagnetics Field and Antennas	4. Optoelectronics and optical fiber communication	5. Research Project
	4. IC Technology VLSI Design	
2. Digital Communication	4. CMOS System Design	
3. Mobile and Satellite Communication		
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Mechatronics	4. Fabrication and Charaterization Techniques for Electronics Devics	5. Research Project
	4. Technology in Smart City	
2 Network Analysis and Synethesis	4. Electronics Commerce	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :Micro-Biology

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1. Genetics Molecular Biology	4. Food Microbiology and Food Saftey	5. Research Project
	4. Biochemistry	
2 Recombinant DNA Technology	4. Cell Biology	
	4. Instrumentation and Biotechniques	
3 Bioprocess Technology	4. Microbial Matabolism	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Medical Microbiology and Parasitology	4. Virology	5. Research Project
	4. Biostatics and Bioinformatics	
2 immunology	4. Microbes in Environment	
	4 Microbial Dignosis in HealthClinics	
	4. Management of Human microbial Disease	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :Physics

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1. Nuclear and partical Physics	4. Ultrasonic and its Applications	5. Research Project
	4.Optical Fibre and Sensors	
2 Advanced Condensed matter physics	4. Defects in Solids	
	4. Digital electronics and Microprocessors	
3 Atomic and molecular Physics	4. Fundamentals of Nanoscience and Nanotechnology	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Optics and Optical Instruments	4. Acoustics	5. Research Project
	4. Advanced Quantum Mechanics	
2. Physics of LASER and its Applications	4. Solar and Photovoltaics	
	4.material Synthesis and Charachterization	
	4.X-ray Emission and Absorpion Spectroscopy	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :- Geology

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1 hydrogeology and Watershed Management	4. Introduction to Geology	5. Research Project
	4. Economic Geology	
2 Geomorphology, remote Sensing and GIS	4. Petroleum Exploration	
	4. Exploration Geophysics and Field Techniques	
3 Environment and engineering Geology	4. Applied hydro Geochemistry	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Ore Geology ore Microscopy	4. Palaeobiology	5. Research Project
	4. Geodesy and mapping	
2 indian mineral Deposits and Mineral Economics	4. Industrial Geology	
	4. Medical Geology	
	4. Environment Hydorgeology	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :- Chemistry

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1. Special-I Org./ Inorg/Phy./Anal. Chemistry	4. Polymer Chemistry-I	5. Research Project
	4. Medicinal Chemistry-I	
2. Special-II Org./ Inorg/Phy./Anal. Chemistry	4 Nuclear Chemistry-I	
	4. Appl. Analytiical	
3. Spectroscopy-I		
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Special-III Org./ Inorg/Phy./Anal. Chemistry	4. Polymer Chemistry-II	5. Research Project
	4. Medicinal Chemistry-II	
2 Special-IV Org./ Inorg/Phy./Anal. Chemistry	4. Nuclear Chemistry-II	
	4. Applied Analytiical-II	
	Note:- Student shall select any one from above	

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :- Mathamatics

Two Years Regular Post Graduate Program

SEM - III		
Major (Mandatory)	Elective	Research Project
1 Complex Analysis	4. Advanced Topics in Operations Research	5. Research Project
	4. Fluid Dynamics -I	
2 Partial Differential Equations	4. General Relativity	
	4 Commutative Algebra	
3 Mathematical Methods	4. Lattice Theory	
	4. Business Mathematics	
	4. MATLAB Programming	
	Note:- Student shall select any one from above	
SEM - IV		
Major (Mandatory)	Elective	Research Project
1 Dynamical Systems	4. Integral Equations	5. Research Project
	4. Fluid Dynamics -II	
2 Functional Analysis	4. Cosmology	
	4. Representation Theory of the Symmetric Group	
3. Mathematical Modelling	4. Matroid Theory	
	4. Python Programming	
	4. Algebraic Number Theory	
	Note:- Student shall select any one from above	

