

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Computer Science

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Software Testing and Quality Assurance	(4x3) 12	4 Natural Language Processing	4	5. Research Project	4	20
		4. Machine Learning				
2 Artificial Intelligenece and Robotics		4. Internet of Things (IoT)				
		4. High-Performance Computing				
3 Big Data Analytics		4. Computer Vision				
		Note:- Student shall select any one from above group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Data Science	(4x2+2) 10	4. Advanced Cryptography	4	5. Research Project	6	20
		4. Embedded System				
2 Cloud Security and Privacy		4. Advanced Computer Networks				
		4 R Programming				
3 Advanced Web Development Using PHP		4. Web Analytics				
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology **Name : Bio- Technology**

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Animal Bio-technology	4x3) 12	4 .Applied Bio-Technology	4	5. Research Project	4	20
		4. Molecular Diagnostics				
2 Plant Bio-technology		4. Clinical trial and Research				
		4 .Phytosecondary Metabolite and its Bioactivity				
3 Genetics Engeering		4.Genomics and Protomics				
		Note:- Student shall select any one from above group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Environmental Bio-technology	4x2+2) 10	4. Research Methodlogy and Biostatics	4	5. Research Project	6	20
		4. Nanobiotechnology				
2 Applied Enviornmental Bio- technology and Ecology		4. Cancer Biology				
		4. DNA Fingerpriting				
3 Ethics, patenting and bio-entrepreneurship		4. Molecular Basic of Drug Discovery				
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology			Name : Zoology			
Two Years Regular Post Graduate Program						
SEM - III						
Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Parasitology	(4x3) 12	4. Fish and Fisheries	4	5. Research Project	4	20
		4. Entomology				
2 Immunology		4. Endocrinology				
		4. Aquatic Biology				
3 Organic Evolution						
		Note:- Student shall select any one from above group				
SEM - IV						
Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Epidemiology	(4x2+2) 10	4. Animal Bio-technology	4	5. Research Project	6	20
		4. Reproductive Biology				
2 Comparative Anatomy		4. Insect Vectors and disease				
		4. Moriculture				
3 Animal Ethology						
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Enviornmental Science

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Water Treatment and Supply	(4x3) 12	4. Soild and Hazardas Waste Management	4	5. Research Project	4	20
		4.Fundamentals of Environmental Science				
2 Wastewater Treatment		4. Ecology				
		4.Atmosphor and Global Climat Change				
		4.Land and Soil Conservation				
3 Air Pollution control						
		Note:- Student shall select any one from above group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 EIA and Enviornmental Laws	(4x2+2) 10	4. Wildlife Conflict and Management	4	5. Research Project	6	20
		4. Sustainable Environment				
2 Pollution control and Industrial saftey		4. Green Technologies				
		4. Climate change, adaptation and mitigation				
3. Environmenta l and Energy Management		4.Urban forestry and management				
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Botany

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Angiosperm-II	(4x3) 12	4. Molecular Biology and Plant Biotechnology-III	4	5. Research Project	4	20
		4. Reproductive Biology and Angiosperm				
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 group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Plant Ecology	(4x2+2) 10	4. Molecular Biology and Plant Biotechnology-IV	4	5. Research Project	6	20
		4. Reproductive Biology and Angiosperm-IV				
2 Plant Bio-technology		4. Paleobotany-IV				
		4. Advanced Phycology-IV				
3 Plant Breeding and Biostatics						
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name : Electronics

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1. Electromagnetics Field and Antennas	(4x3) 12	4. Optoelectronics and optical fiber communication	4	5. Research Project	4	20
		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 group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Mechatronics	(4x2+2) 10	4. Fabrication and Charaterization TechniquesFor Electronics Devis	4	5. Research Project	6	20
		4. Technology in Smart City				
2 Network Analysis and Synethesis		4. Electronics Commerce				
3 Analog Circuit Design						
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :Micro-Biology

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1. Genetics Molecular Biology	(4x3) 12	4. Food Microbiology and Food Saftey	4	5. Research Project	4	20
		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 group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Medical Microbiology and Parasitology	(4x2+2) 10	4. Biostatics and Bioinformatics	4	5. Research Project	6	20
		4. Microbes in Environment				
2 Virology		4. Plant Pathology				
		4 Microbial Dignosis in HealthClinics				
3 immunology		4. Management of Human microbial Disease				
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :Physics

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1. Nuclear and partical Physics	(4x3) 12	4. Ultrasonic and its Applications	4	5. Research Project	4	20
		4.Optical Fibre and Sensors				
2 Advanced Condensed matter physic		4. Defects in Solids				
		4. Digital electronics and Microprocessors				
		4. Fundamentals of Nanoscience and Nanotechnology				
3 Atomic and molecular Physics		Note:- Student shall select any one from above group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Advanced Quantum Mechanics	(4x2+2) 10	4. Acoustics	4	5. Research Project	6	20
		4.Optics and Optical Instruments				
2. Physics of LASER and its Applications		4.Optics and optical Instruments				
		4. Solar and Photovoltaics				
		4.material Synthesis and Charachterization				
3 Advanced Atomic and Molecular Physics		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :- Geology

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 hydrogeology and Watershed Management	(4x3) 12	4. Introduction to Geology	4	5. Research Project	4	20
		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 group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Ore Geology ore Microscopy	(4x2+2) 10	4. Palaeobiology	4	5. Research Project	6	20
		4. Geodesy and mapping				
2 indian mineral Deposits and Mineral Economics		4. Industrial Geology				
		4. Medical Geology				
3 Fuel Geology (Coal Petroleum and Nuclear)		4. Environment Hydrogeology				
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :- Chemistry

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Special-I Org./ Inorg/Phy./Anal. Chemistry	(4x3) 12	4. Spectroscopy-I	4	5. Research Project	4	20
2 Special-II Org./ Inorg/Phy./Anal. Chemistry		4. Polymer Chemistry-I				
		4. Medicinal Chemistry-I				
3 Special-III Org./ Inorg/Phy./Anal. Chemistry		4 Nuclear Chemistry-I				
		4. Appl. Analytical				
		Note:- Student shall select any one from above group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Special-III Org./ Inorg/Phy./Anal. Chemistry	(4x2+2) 10	4. Polymer Chemistry-II	4	5. Research Project	6	20
2 Special-IV Org./ Inorg/Phy./Anal. Chemistry		4. Medicinal Chemistry-II				
		4. Nuclear Chemistry-II				
		4. Applied Analytical-II				
Spectroscopy-13						
		Note:- Student shall select any one from above group				

Gondwana University, Gadchiroli.

Faculty Name : Science and Technology

Name :- Mathamatics

Two Years Regular Post Graduate Program

SEM - III

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Complex Analysis	(4x3) 12	4. Advanced Topics in Operations Research	4	5. Research Project	4	20
		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 group				

SEM - IV

Major (Mandatory)	Credit	Elective	Credit	Research Project	Credit	Total Credit
1 Dynamical Systems	(4x2+2) 10	4. Integral Equations	4	5. Research Project	6	20
		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 group				