Nevjabai Bhaiya Hitkarini Education Society's

Nevjabai Hitkarini College, Bramhapuri

Dist. Chandrapur, (M.S.)-441206
Affiliated to Gondwana University, Gadchiroli
Re-Accredited By NAAC B++ (2.87 CGPA)

Annual Quality Assurance Report
AQAR: 2022-23

CRITERIA - I
CURRICULAR ASPECTS

Metric Number: 1.3.2.

Metric Name: Number of courses that include experiential learning through project work/field work/internship during the year

Principal
Nevjabai Hitkarini College Bramhapuri

Email: nhcbramhapuri@rediffmail.com
Web: nhcb.in/
Phone:07177273293

INDEX

GONDWANA UNIVERSITY, GADCHIROLI.

DIRECTION NO. 16 of 2017.

EXAMINATION LEADING TO AWARD OF THE THREE YEARS BACHELOR OF COMMERCE (B.COM.) (SIX SEMESTER DEGREE COURSE) BASED ON CHOICE BASED CREDIT SYSTEM IN THE FACULTY OF COMMERCE AND MANAGEMENT, DIRECTION, 2017.

(Issued under Provision of Section 12(8) of the Maharashtra Public Universities Act, 2016.)

Whereas, The Maharashtra Public Universities Act, 2016 has come into force with effect from 1st March 2017(Maharashtra Act No. VI of 2017)(hereinafter referred to as the Act);

AND

Whereas,the above mentioned Act is applicable to the Gondwana University, Gadchiroli from 1stMarch, 2017;

AND

Whereas, the chairman, U.G.C. New Delhi has directed the Vice-Chancellor of the university to initiate steps for successful implementation of the choice based credit system(CBCS) from the Academic Session 2015-16 vide letter D.O.No.F-1-1/2015(CM) dated 8/01/2015 ;

AND

Whereas, the U.G.C. has formulated and issued guidelines on adoption of choice based credit system in all the universities;

AND

Whereas, the Vice-Chancellor has directed, on the basis of the resolution of the authorities of the university, to formulate and introduce choice based credit system at U.G. and P.G. level programme in all the faculties in the university;

AND

Whereas, the matter to introduce choice based credit system is required to be regulated by an ordinance to be made in this behalf;

AND

GONDAWANA UNIVERSITY, GADCHIROLI Appendix - VI BACHELOR OF COMMERCE

(THREE YEARS UG COURSE IN FACULTY OF COMMERCE AND MANAGEMENT)

COURSE AND EXAMINATION SCHEME WITH CHOICE BASED CREDIT SYTSEM

(Semester – VI)

Sr. No.	Area	Unique Subject Code	Subject	Course Scheme			No. of Credits	Examination Scheme (Maximum Marks)				Examination Scheme (Minimum Marks)			
				L	T	P		ESE	IA	Project	Total	ESE	IA	P	Total
01	SEC - IV (Foundation Course)	UCA6F01	Corporate Law	4	-	-	4	80	20	-	100	40		-	40
02	Generic Elective- III	UCA6E02	Indian Economics (Rural)	4	-	-	4	80	20	-	100	40		-	40
03	Core (Core Course)	UCA6C03	Business Communication Paper-II	4	-	-	3	60	15	-	75	30		-	30
		UCA6C04	Advanced Accounting Paper-II	5	-	-	3	60	15	-	75	30		-	30
		UCA6C05	Income Tax	5	-	-	4	80	20	-	100	40		-	40
04	DSE	UCA6EM6	Group -A Marketing Management (Service Marketing)	4	-	-	4	40	10	50	100	20		20	40
		UCA6EH6	Group- B Human Resource Development (Labor Law)	4	-	-	4	40	10	50	100	20		20	40
		UCA6EB6	Group -C Banking and Insurance (Recent Trends in Banking and Insurance Paper-II)	4	-	-	4	40	10	50	100	20		20	40
		UCA6EI6	Group -D Information Technology (Software Product And Project Management)	4	-	4/ Batch	4	40	10	50	100	20		20	40

Compulsory Project in final Semester: - In final semester project is to be submitted for DSE subject. For IT related DSE the project team can be constituted of maximum five students per team. However, for other DSEs, the project team can be constituted of maximum ten students per team.

GONDWANA UNIVERSITY, GADCHIROLI

Choice Based Credit System

Syllabus for B. A. Semester- V & VI-

Generic (Interdisciplinary) Elective Course (GEC)-

General Research Methodology

Session- 2019-20 & Onwards

(Dr. S.S. Kawale) Dr. S. G. Lahane Dr. A. D. Shinde Dr. S. E. Zirwase Dr. J. M. Kalode

(xii) Project: Having studied core foundation, ability ebhancement, skill enhancement, discipline specific and generic elective courses upto the end of V semester, the enrolled student is expected to undertake 'Project' as a special course at VI Semester level involing application of knowledge in sloving/analyzing/exploring a real-life situation or a difficult problem. The Head of the department of the concerned program shall from group of 4-6 students and assign a project guide/supervisor from amongst existing teachers who in turn will monitor the progress of project work by the so formed group of students. At the end of the course of study i.e. given semester, the project report of the study undertaken(either hard or spiral bind) should be submitted being certified by the guide/supervisor and duly by the Head of the Department and Principal of the college. This Component shall be evaluated only on internal basic at the institute/college level for 100 marks having a total of 4 credits. Minimum pass marks shall be 40 only.

Project work to students

(xiii) Marking scheme as function of assigned credits to each head of passing viz courses for all the semesters of the given program is as shown in Table 2.0

TABLE 2.0 : COURSE STRUCTURE WISE MARKING SCHEME FOR B.A. UG LEVEL BACHELORS' DEGREE PROGRAM

Type of Courses (No. of Courses x No of Credits	First Year		Second Year		Third Year		CV (Credit Value)
	First Semester	Second Semester	First Semester	Second Semester	First Semester	Second Semester	
Core discipline Specific course(CDSC) (12 x 4)	300 (100 X 3) DS1,DS2,DS3 (Optional subjects)	300 (100 X 3) DS1,DS2,DS3	300 (100 X 3) DS1,DS2,DS 3	---	---	---	1200
Foundation Course(FC) (2x2)	50 (50 X 1) EVS	50 (50 X 1) Democ	---	---	---	---	100
Ability Enhancement Compulsory Course(AECC) (8 x 4)	200 (100 X 2) (Languages)	200 (100 X 2)	200 (100 X 2)	200 (100 X 2)	---	---	800
Skill Enhancement Course(SEC) (4 x 4) (Non-academic zero-credit/Academic)			1 (Letter grade zero-credit	1 (Letter grade zero-credit	200 (100 X 2) communicative languages.	200 (100 X 2)	400

GONDWANA UNIVERSITYGADCHIROLISYLLABUS

For

B. Sc.

BOTANY

SEMESTER III & IV

Under

Choice Based Credit System

(CBCS)

(With effect from: 2018-19)

B.Sc. BOTANY
SEMESTER – III
PRACTICAL
Based on Theory Paper - I & II of Semester – III

[Time 5 Hours]	**[Max. Marks – 30]**
Que. 1: One experiment **[A]** from **Reproductive Biology of Angiosperms**	**05 Marks**
Que. 2: One experiment **[B]** from **Plant Growth and Development**	**05 Marks**
Que. 3: One experiment **[C]**from **Plant Biochemistry**	**05 Marks**
Que. 4: One experiment**[D]**from **Plant Physiology**	**05 Marks**
Que. 5: Identify and comment on given spots:	**04 Marks**
SPOT-E: (Reproductive Biology of Angiosperms)	
SPOT-F: (Plant Growth and Development)	
SPOT-G: (Plant Biochemistry)	
SPOT-H: (Plant Physiology)	
Que. 6: Practical Record (2 Marks) Excursion Report (2 Marks) Viva-voce (2 Marks) **06 Marks**	

NOTE: Well labeled diagrams are expected wherever necessary.

Botany Practicals

SEMESTER – IV

Laboratory Exercises:

Make use of the permanent micro-preparation, temporary mounts, transparencies, photographs, charts etc.

Cell Biology, Genetics and Biotechnology Experiments: (Any five)

1. Examination of various stages of mitosis and meiosis using appropriate plant material(i.e. Onion root tips and flower buds respectively.
2. Study of cytoplasmic organelles.
3. Working out of Laws of inheritance using dry seeds / plastic beads by applying Chisquare($\chi 2$) test.
4. To get acquainted with the Laboratory organization.
5. To get acquainted with tools of genetic engineering, laboratory equipments, apparatusand instruments in biotechnology laboratory.
6. To study the different methods of sterilization.
7. Media preparation required for culture.
8. To study the structure of following vectors on the basis of photographs and diagrams:Plasmid, Bacteriophage and *Agrobacterium.*
9. To demonstrate the technique of micropropogation by using different explants
10. To demonstrate the technique of anther culture.
11. To isolate protoplast from different tissues using commercially available enzymes.

(NOTE:1. Frequent Industrial/ Laboratory visits are necessary. **2.** Submit Industrial/ Laboratory visit report duly signed by HOD).

Ecology Experiments : (Note: Any Ten experiments; Experiment No. 01 is compulsory)

B.Sc. BOTANY
SEMESTER – IV
PRACTICAL
Based on Theory Paper - I & II of Semester – IV

[Time 5 Hours] **[Max. Marks – 30]**

Que. 1: One experiment **[A]** from **Cell Biology mitosis/meiosis** **04 Marks**

Que. 2: One experiment **[B]** from **Genetics** **04 Marks**

Que. 3: One experiment **[C]**from **Plant Biotechnology** **04 Marks**

Que. 4: One experiment**[D]**from **Plant Ecology** **Exp-I** **04 Marks**

Que. 5: One experiment **[E]** from **Plant Ecology (other ecology experiments)** **04 Marks**

Que. 5: Identify and comment on given spots: **04 Marks**

SPOT-F: (Cell Biology)– Cell organelles

SPOT-H: (Plant Ecology)- Morphology

SPOT-I: (Plant Ecology) - Anatomy

Que. 6: Practical Record (2 Marks) Excursion Report (2 Marks) Viva-voce (2 Marks) **06**

MarksNOTE: Well labeled diagrams are expected wherever necessary.

GONDWANA UNIVERSITY, GADCHIROLI

CHOICE BASED CREDIT SYSTEM (CBCS) SYLLABUS

PROGRAMME- BACHELOR OF SCIENCE (B.Sc.), SEMESTER - IV

SUBJECT- ZOOLOGY, PRACTICAL (CREDITS 2)

CORE COURSE-VII & VIII

USZOP04

PRACTICAL

B.Sc. II (Zoology), Semester-IV

DEVELOPMENTAL BIOLOGY & PHYSIOLOGY AND BIOCHEMISTRY-II

Section A: Developmental Biology

Study of the following slides-

1. Frog embryology: T.S. of Tadpole through internal and external gills, V.S. of Blastula, Gastrula and Neurula,
2. Study of permanent slide of Chick embryology : Whole mount of 18 hrs, 24 hrs, 30 hrs, 36 hrs and 72 hrs.

Section B: Physiology experiment

1. Detection of urea, albumin, sugar and creatin in urine
2. Sperm count of any domestic animal (Source of semen: Government artificial insemination centre).
3. Study of histological slides of Mammal– T.S. of Kidney, Pituitary, Thyroid and Adrenal glands, Testis, Ovary, Uterus, Placenta, Medulated and Non medulated nerve fibres, Smooth and Striated muscle, Spinal cord.

Section C: Biochemistry experiment

1. Preparation of haemin and haemochromogen crystal
2. Quantitative estimation of amino acids using ninhydrin reaction
3. Estimation of glycin by Sorenson formal titration

Section D : Permanent stained micro preparation

1. Examination of gametes of Frog – Sperm and Ova through permanent slide or microphotograph

Section E : Submission of slides and study tour report

18

Practical Question Paper and Distribution of Marks

Practical - Distribution of Marks **Total marks – 30 (Time – 4 hours duration)**

1. Physiology experiment..... 05
2. Identification and comments on spots 10
   (Mammalian histology-3, Frog embryology-1 and Chick embryology-1 spots)
3. Biochemistry experiment 05
4. Submission of slides or microphotograph and study tour report..... 02
5. Submission of certified practical record..... 03
6. Viva- voce..... 05

GONDWANA UNIVERSITY, GADCHIROLI

CHOICE BASED CREDIT SYSTEM (CBCS) SYLLABUS

PROGRAMME- BACHELOR OF SCIENCE (B.Sc.), SEMESTER-IV

SUBJECT- ZOOLOGY – THEORY INTERNAL ASSESSMENT

Theory Internal Assessment (Paper I and Paper II) – 20 Marks(Assignment, class test, curricular and co-curricular activities, seminar, field work, tour etc.)

Format for the theory internal assessment

Sr.No	Evaluation type	Marks P-I	Marks P-II
01	One assignment	2	2
02	One class test	5	5
03	Active participation in routine class activities / seminars etc.	3	3

19

GONDWANA UNIVERSITY, GADCHIROLI.

Ordinance No. 58 of 2017

Incorporating a Compulsory Course onEnvironmental Studiesin the Under Graduate Coursesoffered under all the Faculties, ordinance, 2017.

Whereas, it is expedient to provide an ordinance in respect of Incorporating a Compulsory Course on Environmental Studies in the Under Graduate Courses offered under all the Faculties, for the purposes hereinafter appearing, the Management council is hereby pleased to make the following ordinance :

1. This ordinance may be called**"**Incorporating a Compulsory Course on Environmental Studies in the Under Graduate Courses offered under all the Faculties, ordinance, 2017".

2. This ordinance shall come into force with effect from the date of its making by the Management council.

3. This course will be referredto as compulsory course of Six months duration in Environmental Studies at the under-graduate level of all streams and faculties of higher education under this University and will be taught in second year with course of study and can be cleared in the third year with course of study in case the student/s remain absent on the scheduled day of the examination or fails to pass the course in its first attempt.

4. However excepting the Faculty of Engineering and Technology wherein the aforesaid course shall be taken up during First Year of course of study and that it can be cleared in the second year of course of study in case the student/s remain absent on the scheduled day of the examination or fails to pass the course in its first attempt. student taking direct admission to the second year B.E. course shall be exempted from the fees for the course of environmental studies.

5. Provision of this ordinance will not be applicable to those courses in which the subject on EnvironmentalScienceshas been incorporated as subject of study and examinations such as B.Sc. (Environmental Science) and all other similar cases at the U.G. level."

6. The Principal would appoint Coordinator and Assistant Coordinator as per the need to coordinate the teaching of the course, appoint contributory teachers, if necessary. At the end of the course, the college would conduct the examination. It will appoint paper setters and examiners. The final grades of candidates should be informed to the University in the prescribed format. The expenditure incurred for all the required manpower and necessary support services shall be recovered from the remaining amount of fees.

7. Qualifications of a Teacher: A teacher in any subject possessing relevant knowledge to teach the "Course on Environmental Studies" shall be eligible.

8. This course is also compulsory for external students. In case of external students, they can enroll themselves in any college for the aforesaid course and can complete the same.

9. The admitted undergraduate student/s has to pass in the examination of this course in order to obtain degree from the Affiliating University **or alternatively** in lieu of the entire course, the given students in the batches of 20 may be assigned a project work consisting of People's/Community Bio-diversity Registers (PBR/CBRs) of any Gram Panchayat as per format prescribed by Bio-diversity Authority of India under the guidance of a teacher which shall be evaluated for 100 marks.

10. The concerned Faculty can adopt this mandatory course as per the suggested guidelines without or with minor modifications that are deemed to be desirable considering the curricular structure of the given under-graduate course.

11. The syllabus, relevant guidelines regarding the scheme of examination and fees structure are appended with this ordinance as Annexure-A, Annexure-B andAnnexure-C respectively.

Annexure– A: Syllabus

Course Code: **ES (CompulsoryCourse)**
Title of the Course: **Environmental Studies**

Unit	Contents	Hrs.
I	**The Multidisciplinary nature of environment** . Definition, scope and importance. . Need for public awareness – Institutions in environment, people in environment	01
II	**Social Issues and the Environment** . From Unsustainable to Sustainable development, Urban problems related to energy; Water conservation, rain water harvesting, watershed management . Resettlement and rehabilitation of people; its problems and concerns. Case studies. . Environmental ethics: Issues and possible solutions, resource consumption pattern and need for equitable utilisation, Urban and rural equity issues, need for gender equity . Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies. . Wasteland reclamation - Consumerism and waste products. . Environment Protection Act. . Air (Prevention and Control of Pollution) Act. . Water (Prevention and Control of Pollution) Act. . Wildlife Protection Act. . Forest Conservation Act. . Issues involved in enforcement of environmental legislation. . Public awareness- environmental calendar of activities, self initiation	04
III	**Human Population and the Environment** . Global population growth, variation among nations, Population explosion - Family Welfare Programmes, methods of sterilization; Urbanization . Environment and human health – climate and health, infectious diseases, water-related diseases, risk due to chemicals in food, cancer and environment . Human Rights – equity, nutrition and health rights, IPRs, community biodiversity registers (CBRs) . Value Education – environmental values, valuing nature, cultures, social justice, human heritage, equitable use of resources, common property resources, ecological degradation . HIV / AIDS; Women and Child Welfare. . Role of Information Technology in Environment and human health. . Case Studies.	03
IV	**Natural resources:Renewable and non-renewable resources** . Natural resources and associated problems. - Forest resources: Use and over exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people. - Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. - Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. - Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer – pesticide problems, water logging, salinity, case studies. - Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies. - Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. . Role of an individual in conservation of natural resources. . Equitable use of resources for sustainable lifestyles	04
V	**Ecosystems** . Concept of an ecosystem- ecosystem degradation, resource utilisation . Structure and function of an ecosystem - Producers, consumers and decomposers. . Energy flow in the ecosystem – water, carbon, oxygen, nitrogen and energy cycles, integration of cycles in nature . Ecological succession - Food chains, food webs and ecological pyramids. .Ecosystemtypes, characteristic features, structure and functions of the following ecosystem- - Forest ecosystem	03

	- Grassland ecosystem - Desert ecosystem - Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)	
VI	**Biodiversity and its conservation** . Introduction - Definition: genetic, species and ecosystem diversity. . Bio-geographical classification of India. . Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and optional values. . Biodiversity at global, National and local levels. . India as a mega-diversity nation; Hot-spots of biodiversity. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts. . Endangered and endemic plant and animal species of India. . Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.	04
VII	**Environmental Pollution** . Definition . Causes, effects and control measures of:- - Air pollution - Water pollution - Soil pollution - Marine pollution - Noise pollution - Thermal pollution - Nuclear hazards . Solid Waste Management: Causes, effects and control measures of urban and industrial waste. . Role of an individual and institutions in prevention of pollution. . Disaster management: floods, earthquake, cyclone and landslides. . Pollution case studies.	04
VIII	**Field work** . Visit to a local area to document environmental assets like river / forest / grass land / hill / mountainetc . Visit to a local polluted site - Urban / Rural / Industrial / Agriculturaletc . Study of common plants, insects, birds. . Study of simple ecosystems - pond, river, hill slopes, etc.	02
	Total	25

Annexure– B: Scheme of Examination

Course Scheme					Examination Scheme		
Lectures	Tutorial(s)	Practical	Periods/week	Credits	MSE	IE	Total
2	0	0	2	0	75	25	100

1. Contents of the syllabi as per Appendix A mentioned under unit I to VII shall be for teaching and for the examination to be conducted at the end of the semester i.e. MSE for 75 marks. The examination paper shall be having MCQs, Short answer type questions and an Essay. The IE consisting of 25 marks will be in the form of Report to be submitted based on field work done as per Unit No VIII.

2. The result would be declared in the form of Grades as shown below:
Grade **'O'** for score above 75; **A**:61-75; **B**:51-60; **C**:40-50

Annexure– C: Fee Structure

A fee of Rs 150/- per student shall be charged and its utilization is as Rs 25/- to be deposited with the Affiliate University and Rs 125/- to the concerned college for providing human resource, supporting infrastructure and the administrative expenses pertinent to the course as approved by the Affiliate University.

Gondwana University, Gadchiroli

FACULTY OF COMMERCE

DIRECTION GOVERNING THE EXAMINATIONS LEADING TO THE AWARD OF TWO YEARS POST GRADUATE DEGREE, IN THE FACULTY OF COMMERCE WITH SEMESTER PATTERN & CHOICE BASED CREDIT SYSTEM FROM THE ACADEMIC SESSION 2016-17

GONDWANA UNIVERSITY, GADCHIROLI

MASTER OF COMMERCE
(TWO YEARS COURSE IN FACULTY OF COMMERCE)
COURSE AND EXAMINATION SCHEME WITH CHOICE BASED CREDIT SYSTEM

Area	Unique Subject Code (USC)	Subject	Teaching Scheme				Examination Scheme				
			Weekly Hours			No. of Credits	Theory				
			L	T	Total Hours		Duration of Paper (Hrs.)	Max. Marks	Max. Marks Internal Assessment	Total	Min. Passing Marks
								ESE	IE		
Core Course	PCC4C01	Advanced Management Accounting	4	-	4	5	3	80	20	100	40
Compulsory Foundation	PCC4F0P	Project + Seminar	4	-	4	14	-	Seminar-50		150	-
								Project	E- 50 + I-50		
Elective Foundation See instructions for selecting subjects from 'Pool of subjects'	See 'Pool of Subjects' for USC	Elective - I	4	-	4	4	3	80	20	100	40
Elective See instructions for selecting subjects from 'Pool of subjects'	See 'Pool of Subjects' for USC	Elective - II	4	-	4	4	3	80	20	100	40

IV – SEMESTER

L= LECTURES T= THEORY ESE= END SEMESTER EXAMINATION IE= INTERNAL EVALUATION

Gondawana University, Gadchiroli
Master of Arts (Choice Based Credit System Semester Pattern)
M. A. Geography

SEMESTER I

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
				Max Marks			Min. Passing Marks		
		Theory / Practical	Duration Hrs	External TH Marks (Univ)	Practical / Internal Marks	Total Marks	External TH Marks	Practical /Internal Marks	Total
1	Paper – I - Core subject (History of Geographycal Thoughts)	5	3	80	20	100	32	8	40
2	Paper - II- Core subject (Oceanography)	5	3	80	20	100	32	8	40
3	Paper - III- Core subject (Climatology)	5	3	80	20	100	32	8	40
4	Paper - IV (Practical I)	10	6	0	100	100	0	40	40
	Total	25	12	240	100/60	400	96	64	160

SEMESTER II

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
				Max Marks			Min. Passing Marks		
		Theory / Practical	Duration Hrs	External TH Marks (Univ)	Practical / Internal Marks	Total Marks	External TH Marks	Practical /Internal Marks	Total
1	Paper - I - Core subject (Research Methodology)	5	3	80	20	100	32	8	40
2	Paper - II - Core subject (Geomorphology)	5	3	80	20	100	32	8	40
3	Paper - III- Core subject (Geography of Resources)	5	3	80	20	100	32	8	40
4	Paper - IV(Practical II)	10	6	0	100	100	0	40	40
	Total	25	12	240	100/60	400	96	64	160

SEMESTER III

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
				Max Marks			Min. Passing Marks		
		Theory / Practical	Duration Hrs	External TH Marks (Univ)	Practical / Internal Marks	Total Marks	External TH Marks	Practical /Internal Marks	Total
1	Paper - I - Core subject (Geo. Of Manufacturing & Transport)	5	3	80	20	100	32	8	40
2	Paper - II - Core subject (Agriculture Geo.)	5	3	80	20	100	32	8	40
3	Paper - III – Elective Subject i(Population Geography) iii(Geography of tourism) Iii (Bio- Geography)	5	3	80	20	100	32	8	40
4	Paper - IV(Practical III)	10	6	0	100	100	0	40	40
	Total	25	12	240	100/60	400	96	64	160

SEMESTER IV

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
				Max Marks			Min. Passing Marks		
		Theory / Practical	Duration Hrs	External TH Marks (Univ)	Practical / Internal Marks	Total Marks	External TH Marks	Practical /Internal Marks	Total
1	Paper - I - Core subject (Geography of Settlement)	5	3	80	20	100	32	8	40
2	Paper - II - Core subject (Social Geography)	5	3	80	20	100	32	8	40
3	Paper –III – Elective Subject- i (Regional Planning) ii (Environmental Geography) iii (Political Geography)	5	3	80	20	100	32	8	40
4	Paper - IV(Practical IV)	10	6	0	100	100	0	40	40
	Total	25	12	240	100/60	400	96	64	160

1

Semester - I

Marks- 100

PAPER – IV

PRACTICAL – I

1. Preparation and interpretation of the following maps and diagrams. (20 Marks – 2 Periods)

Group A (10 Marks)

i Equivariable
ii Equipluves
iii Frequency graph
iv Rainfall dispersion diagram
v Running mean
vi Wind rose and compound wind rose

Group B (10 Marks)

i. Water budget graph
ii. Climatograph
iii. Hythergraph
iv. Taylor's Climograph
v. Compound columnar graph
vi. Index of aridity and index of moisture

2. Study of Indian daily weather map and weather analysis. (15 Marks – 2Periods)

Study and interpretation of at least four maps of India pertaining to –

(a) S. W. Monsoon Season
(b) Summer season
(c) Transition period
(d) Cyclonic

3. Advanced techniques of spatial analysis:

(a) **Remote sensing** (15 Marks –2 Periods)

Definition of remote sensing. Remote sensing platforms and scanners. Electromagnetic radiation and physics of remote sensing. Arial remote sensing data products- Arial photographs, types, scales, displacement, parallax, aerial mosaics, radial line methods (graphical) (exercise).

(b) **Geographical information system** (10 Marks – 2 Periods)

Introduction to GIS. Fundamental of GIS- Spatial concepts and spatial relationships. Data models and structures- raster and vector. Integration procedure for spatial and non-spatial data. Scanning and digitization exercises. Editing and topology creation. Thematic mapping.

4. Excursion: (20 Marks – 2 Periods)

Visit to any plain, plateau, hilly, coastal area, Mines, Forest, Tiger Project, National Park, Sanaturies, Dams, meteorological centre and submit a report with photographs.

5. Viva Voce (10 Marks)
6. Practical Record (10 Marks)

GONDWANA UNIVERSITY
GADCHIROLI

SYLLABUS
For
M. Sc.
BOTANY
SEMESTER III & IV

Under
Choice Based Credit System
(CBCS)
(With effect from: 2017-18)

Project Work/Dissertation Scheme / Guidelines for the Students, Supervisors and Examiners

Every student is required to carry out a project work in semester IV. The project can be of following types. A) Experimental Project Work; OR B) Field Based Project Work; OR C) Review writing based Project Work.

Experimental Project Work and Field Based Project Work:

Student can carry out Experimental / Field Based Project Work on a related research topic of the subject /course. It must be an original work and must indicate some degree of experimental work / Field work. On the basis of this work, student must submit the Project Report (typed and properly bound) in two copies at least one month prior to commencement of the final Practical / lab Examination of Semester IV. The project report shall comprise of Introduction, Material and Methods, Results, Discussion, Summary, Conclusion and, References along with the declaration by the candidate that the work is original and not submitted to any University or Organization for award of the degree and certificate by the supervisor and forwarded through Head / Course-coordinator / Director of the Department / Centre or the Principal of the College.

Review writing based Project Work.

Student can carry out review writing Based Project Work on a related topic of the subject / course. It must be a review of topic based on research publications. Student shall refer peer reviewed original research publications and based on findings, write a summary of the same. The pattern of review writing shall be based on reputed reviews published in a standard, peer reviewed journals. On the basis of this work, student must submit the Project Report (typed and properly bound) in two copies at least one month prior to commencement of the final Practical / lab Examination of Semester IV. The project report shall comprise of Abstract, Introduction, detailed review, Discussion, Summary, Conclusion and, References along with the declaration by the candidate that the work is original and not submitted to any University or Organization for award of the degree and certificate by the supervisor and forwarded through Head / Course-coordinator / Director of the Department / Centre or the Principal of the College.

*The supervisors for the Project Work shall be from the following.
A person shall be an approved faculty member in the relevant subject.
OR
Scientists of National Laboratories / Regional Research Laboratories/ Experts from R&D in Industry who are approved by competent authority in such facilities by the Union Government / the State Government / Gondwana University / Other Universities recognized by UGC.

The Project Work will carry total 100 marks and will be evaluated by both external and internal examiner in the respective Department / Center / Affiliated College.

The examiners will evaluate the Project Work/Dissertation taking into account the coverage of subject matter, arrangement and presentation, references, etc.

For written Project work	**40**	**Marks – Evaluated jointly by External & Internal examiner**
Oral Presentation	20	Marks – Evaluated jointly by External & Internal examiner
For Viva-Voce	20	Marks – Evaluated by External examiner
Internal Assessment	20	Marks – Evaluated by Internal examiner

Total	100	

Seminar

Guidelines for Students, Supervisors and Examiners

In each semester, the student will have to deliver a seminar on any topic relevant to the syllabus / subject encompassing the recent trends and development in that field / subject. The topic of the seminar will be decided at the beginning of each semester in consultation with the supervising teachers. The student has to deliver the seminar which will be followed by discussion. The seminar will be open to all the teachers of the department, invitees, and students.

The students should submit the seminar report typed and properly bound in two copies to the head of the department. The said shall be evaluated by the concerned supervisor / head of the department. The marks of the seminar shall be forwarded to the university within due period through head of the Department. The record of the seminar should be preserved till the declaration of the final result.

Internal Assessment:

1. The internal assessment marks shall be awarded by the concerned teacher.
2. The internal assessment marks shall be sent to the University after the Assessment in the prescribed format.
3. For the purpose of internal assessment the University Department / College shall conduct any three assignments described below. Best two scores of a student in these tests shall be considered to obtain the internal assessment score of that student.
4. If the student does not appear for the Practical Exam he shall be declared failed in Practical Examination irrespective of marks obtained in Internal Practical Assessment. However the Internal Practical Assessment marks will be carried forward for his next supplementary Practical Exam.
5. General guidelines for Internal Assessment are:
   a) The internal assessment marks assigned to each theory paper as mentioned in Appendix 1 shall be awarded on the basis of assignments like class test, attendance, home assignments, study tour, industrial visits, visit to educational institutions and research organizations, field work, group discussions or any other innovative practice / activity.
   b) There shall be three assignments (as described above) per course.
   c) There shall be no separate / extra allotment of work load to the teacher concerned. He/ She shall conduct the Internal assessment activity during the regular teaching days / periods as a part of regular teaching activity.
   d) The concerned teacher / department / college shall have to keep the record of all the above activities until six months after the declaration of the results of that semester.
   e) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method he / she proposes to adopt and the scheme of marking for internal assessment. (Prescribed in syllabus of respective Subjects).
   f) Teacher shall announce the schedule of activity for internal assessment in advance in consultation with HOD / Principal.

Practical Examination

1. Each practical carries 100 marks. The scheme of marking shall be as per given in the syllabi of respective subjects.
2. Practical performance shall be jointly evaluated by the External and Internal Examiner. In case of discrepancy, the External Examiner's decision shall be final.
3. Duration of practical examination will be as per given in the syllabi of respective subjects.
4. The Practical Record of every student shall carry a certificate as shown below, duly signed by the teacher-in-charge and the Head of the Department. If the student fails to submit his / her certified Practical Record duly signed by the Teacher-In-Charge and the Head of the Department, he / she shall not be allowed to appear for the Practical Examination and no Marks shall be allotted to the student.

Board of Studies in Physics

FACULTY OF SCIENCE

GONDWANA UNIVERSITY, GADCHIROLI

Syllabus of

M.Sc. Second Year (Semester Pattern) (Choice Based Credit System)

SUBJECT - PHYSICS

Semester III & Semester IV

Semester IV:

Core	Theory / Practical	Teaching Scheme Hrs/ week			Credit	Examination Scheme					
						Duration in hrs	Max. Marks		Total	Minimum Marks	
		Theory	Practical	Total			External	Internal		Theory	Practical
Core 11 (PSCPHY T11)	Paper 13 Nuclear and Particle Physics	4	-	4	4	3	80	20	100	40	
Core 12 (PSCPHY T12)	Paper 14 Solid State Physics	4	-	4	4	3	80	20	100	40	
Core Elective II (PSCPH YT15)	Paper 15 Material Science II OR Nanoscience and Nanotechnology II OR Atomic and Molecular Physics II	4	-	4	4	3	80	20	100	40	
Fundation Course II	Paper 16 Spectroscopic Applications OR Optics and Optical instruments	4	-	4	4	3	80	20	100	40	
Practical.	Practical 7 (Based on Core11,12and Elective II)	-	8	8	4	3-8*	80	20	100		40
Project	Project	-	8	8			80	20	100		40
Seminar 4	Seminar 4	2	-	2	1			25	25	10	
TOTAL		18	16	34	25		480	145	625	170	80

GONDWANA UNIVERSITY, GADCHIROLI

M.Sc.-II Semester III, IV (Chemistry)

(Effective from 2017-18) (CBCS)

1. There will be four theory papers in every semester which will carry 80 marks each of 3 hrs. duration.
2. In semester III student will opt for special paper from four options available.
3. In semester IV student will opt for an elective paper out of the five options available.
4. There will be internal assessment of 20 marks per paper per semester.
5. Each paper per semester with total of 100 marks(80+20 i.e. theory+internal assessment) will carry 4 credits.
6. The internal assessment will be based on Attendance, Home assignment, Unit test Terminal test and participation in departmental activities.
7. There will be two practical examinations in semester III i.e. Pract I(special) and Pract II(Elective) of 6-8 hours duration of 80 marks with 4 credits each.Every practical will be having 20 internal practical marks.
8. In semester IV there will be one practical (Special) and another as Project of 80 marks each.
9. In each semester, the student will have to deliver a seminar on any topic relevant to the syllabus / subject encompassing the recent trends and development in that field / subject. This will carry 25 marks per seminar with one credit.
10. So, the total marks allotted to the Chemistry subject per semester is 625 marks: Theory (320 marks) + Internal assessment (120 marks) + Practicals (160 Marks)+ Seminar (25Marks)= 625marks (total)
11. Each theory paper consists of four units of fifteen hours per unit.

The following syllabi are prescribed on the basis of four hours per week of each paper and nine practical periods per batch per week.

General scheme for distribution of marks in practical examination

Time : 6-8 h (One day Examination) Total Marks : 80)
Exercise-1 - 30 Marks
Exercise-2 - 20 Marks
Viva-Voce -15Marks
Record -15 Marks

PSCChP11 Practical-XI Project

9 h/week 80 Marks

Project is a part of practical examination. Project should be carried out by the student under the supervision of Guide/Teacher. The examination shall be conducted by External and Internal Examiners. Students are supposed to present their work either on LCD Projector / OHP or blackboard.

The division of marks will be as follows:

External examiner: 40 marks

Internal examiner (Guide/ Teacher): 40 marks

(With Internal Assessment of 20 Marks)

Note: One external examiner shall be appointed for evaluation of group of 6 students.

PSCChP12 Seminar-

2 h /week Marks: 25

Seminar of 30 minutes duration will be a part of internal assessment for 25 marks (1 credit). Seminar should be delivered by the student under the guidance of concerned teacher on the topic allotted by the teacher. The topic will be related to the syllabus. Marks will be allotted by a group of teachers.

Course Structure for

Degree of Master of Library and Information Science (MLISc)

(2 Year Integrated Course : Semester, Choice Based Credit System)

And

Bachelor of Library and Information Science (BLISc)

(Equivalent to MLISc first Year CBCS)

Course code	Course Name	Credit Distribution		Marks Distribution		
		Theory	Practical	Univ. Exam.	Internal Assessment	Grand Total
FIRST SEMESTER						
LIS/I/T/01	Foundation of Library and Information Science	04	00	80	20	100
LIS/I/T/02	Knowledge Organization and Library Classification	04	00	80	20	100
LIS/I/T/03	Library Cataloguing	04	00	80	20	100
LIS/I/T/04	Information Sources	04	00	80	20	100
LIS/I/T/05	Information Technology Basics	04	00	80	20	100
LIS/I/P/06	Classification Practice (Part-I)	00	04	80	20	100
LIS/I/P/07	Cataloguing Practice (Part-I)	00	04	80	20	100
LIS/I/P/08	Information Technology Basics Practice (Part-I)	00	04	80	20	100
LIS/I/P/09	Information Sources Practice (Part-I)	00	04	80	20	100
Total		20	16	720	180	900
SECOND SEMESTER						
LIS/II/T/10	Library House Keeping Operation	04	00	80	20	100
LIS/II/T/11	Management of Libraries and Information Centres	04	00	80	20	100
LIS/II/T/12	Information Services	04	00	80	20	100
LIS/II/T/13	Library Automation	04	00	80	20	100
LIS/II/T/14	Research Methods and Statistical Techniques	04	00	80	20	100
LIS/II/P/15	Classification Practice (Part – II)	00	04	80	20	100
LIS/II/P/16	Cataloguing Practice (Part-II)	00	04	80	20	100
LIS/II/P/17	Information Technology Basics Practice (Part-II)	00	04	80	20	100
LIS/II/P/18	Information Sources Practice (Part –II)	00	04	80	20	100
Total		20	16	720	180	900

Degree of Master of Library and Information Science (MLISc)

(2 Year Integrated Course : Semester, Choice Based Credit System)

Second Year

And

Degree of Master of Library and Information Science (MLISc)

Course code	Course Name	Credit Distribution		Marks Distribution		
		Theory	Practical	Univ. Exam.	Internal Assessment	Grand Total
THIRD SEMESTER						
LIS/III/T/19	Information Analysis, Repackaging and Consolidation	04	00	80	20	100
LIS/III/T/20	Information Storage, Retrieval and Bibliographical Control	04	00	80	20	100
LIS/III/T/21	System Analysis and Bibliometrics	04	00	80	20	100
LIS/III/T/22	ICT Applications in Libraries and Information Centres	04	00	80	20	100
	Elective Papers : Any one of the following	04	00	80	20	100
LIS/III/T/23-EL.1 LIS/III/T/2-El.2 LIS/III/T/23-EL.3 LIS/III/T/2-EL.4	Elective 1- Industrial Information System Elective 2- Agricultural Information System Elective 3- Legal Information System Academic Library and Information System					
LIS/III/P/24	Information Technology Application (Part-I)	00	04	80	20	100
LIS/III/P/25	Educational Tour Report, Survey of \libraries and Information Centres	00	02	00	50	50
LIS/III/P/26	Internship	00	02	00	50	50
LIS/III/P/27	Project Seminar	00	02	00	50	50
	Total	20	10	480	270	750
Foundation Paper –Only for Other P.G. Department (Interdisciplinary) Students (Not for LIS Students)						
LIS/III/T/28 / FC- Part -I	Fundamentals of Library Science	04	00	80	20	100

FOURTH SEMESTER						
LIS/IV/T/29	Information System and Networks	04	00	80	20	100
LIS/IV/T/30	Management of ICU, Marketing and Technical Writing	04	00	80	20	100
LIS/IV/T/31	Computer Generated Indexes and Retrieval Techniques	04	00	80	20	100
LIS/IV/T/32	Digital Libraries	04	00	80	20	100
	Elective Papers- Any one of the following	04	00	80	20	100
LIS/IV/T/33 EL.1 LIS/IV/T/33 -LE.2 LIS/IV/T/33 -EL.3 LIS/IV/T/33 -EL.4	Archival, Museums and Archaeological Information System Bio-technology Information System *Engineering and* Technological Library and Information System Public Library and Information System					
LIS/IV/P/34	Information Technology Applications (Part-II)	00	04	80	20	100
LIS/IV/P/35	Project Work Report Vivo Voce	00	04 02	80 50	20	150
	Total	20	10	610	140	750
Foundation Paper –Only for Other P.G. Department (Interdisciplinary) Students (Not for LIS Students)						
LIS/IV/T/36 / FC-Part II	Fundamentals of Information Science	04	00	80	20	100

GONDWANA UNIVERSITY, GADCHIROLI

BOARD OF STUDIES IN ZOOLOGY

Sem. IV

SUBMISSION OF

CHOICE BASED CREDIT SYSTEM

SYLLABUS FOR POST GRADUATE (M. Sc.) PROGRAMME

FROM SESSION 2016 - 17

8.	Viva – voce	10
		80
	Internal Assessment	20
	Total marks	100

100

- **Project work**
  (80 marks project evaluation including viva + 20 marks Internal assessment)

- **Suggested Readings**

1. A textbook of fishery science and Indian fisheries- S. B. L. Srivastava
2. Fish and fisheries – Kamleshwar Pandey and J. P Shukala
3. A textbook of fish biology and fisheries – S.S. Khanna and H. R. Singh
4. A text book of fish biology and Indian fisheries- R.P. Parihar
5. General and Applied Ichthyology- S.K.Gupta and P.C.Gupta
6. An introduction to fishes- S. S. Khanna.
7. Fish processing technology – T. K. Govindon.
8. Hand book of breeding of major carps by pituitary hormones – S. L. Chonder.
9. Aquaculture – T. V. R. Pillay.
10. Diseases of cultivable freshwater fishes and their control – N. M. Chokraborty.
11. Fish and fisheries in India - V. G. Jhingran.
12. Indian fishes (Identification of Indian Teleosts) – T. A. Qureshi.
13. Introduction to tropical fish assessment per share, Erik Ursine and Siberian C. Verma.
14. Fish population dynamics – M. Devaraj.

Semester –IV
Paper-XIV, Special Group-Environmental Biology-III
Environmental Pollution and Aquaculture

Unit-I

1.1 Pollution Ecology: definition, sources of pollution, classification of pollutants, primary and secondary pollutants.

1.2 Air pollution: definition, sources, air pollutants and its effects on human health and atmosphere, control of air pollution.

1.3 Water Pollution: definition and sources, water pollutants and its effects, control of water pollution.

1.4 Noise pollution, sources, physiological and psychological effects of noise pollution, control measures of noise pollution.

Unit-II

2.1 Land pollution: definition, sources, effects and control of insecticide pollution.