



DIGBOI COLLEGE

ITAVATA, P.O.: DIGBOI-786171(ASSAM)

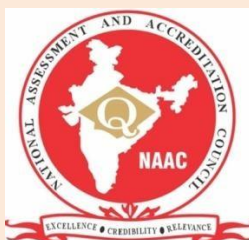
Third Cycle NAAC Accreditation

CRITERIA-1

CURRICULAR ASPECTS

1.3. CURRICULUM ENRICHMENT

Submitted to



THE NATIONAL
ASSESSMENT AND
ACCREDITATION COUNCIL

**1.3.2. COURSES THAT INCLUDE EXPERIENTIAL
LEARNING THROUGH PROJECT WORK/FIELD
WORK/INTERNSHIP DURING
LAST FIVE YEARS**



**CONTENT:
Programme / Curriculum/ Syllabus
of the courses**

DEPARTMENT OF BOTANY
DIGBOI COLLEGE

BOTANY MAJOR
BOTMP- 605

Marks: 80(52End+13IA), Project work 15

A. Molecular Biology and Immunology

1. Preparation of ball and stick model of Nucleolides.
2. Detection/Estimation of RNA/DNA
3. Study of antimicrobial activity (inhibition zone) of various plant extract of economic importance.

B. Biophysics and Bioinformatics:

1. Application of different microscopes in biological studies.
2. Separation techniques.
3. Different e-resources and database search.
4. Similarity search in sequence such as BLAST / FASTA.
5. Submission of charts and models etc.

****PROJECT WORK:** **Topic of the Project work may be given in the Semester-V and should have scientific investigation and outcome with statistical analysis of data (where necessary). The same have to be presented in the headings: Title, Introduction, Object Materials & Methods, Results, Conclusion and References. The project will be evaluated in Semester-VI with the paper BOTMP-605. Separate project preferably be given to each student.*

SCHEME OF THE PRACTICAL EXAMINATION:

Time: 6 hrs.		Marks: 52+15=67
1. Molecular Biology		12
2. Immunology		8
3. Biophysics		10
4. Bioinformatics		10
5. Practical record book		7
6. Viva-Voce		5
		<hr/>
		Total 52
***Project		15
		<hr/>
		67

DEPARTMENT OF CHEMISTRY
DIGBOI COLLEGE

SEMESTER I

(Major)

Paper: MM 101

Chemistry I : Physical + Inorganic + Organic

Marks: [(26+6 Int.)+ (27+7Int.) + (27+7(Int.))] = 100

(Students will use separate answer scripts for Physical, Inorganic and Organic Chemistry)

Objective: To understand Inorganic, Organic and Physical Chemistry in their advanced treatment

Section I Physical Chemistry

Marks: (26+6 Int.) =32

Unit I- Gas

Derivation of kinetic gas equation, Maxwell distribution of molecular speed, different types of average speeds, collision properties, Mean free path, determination of collision diameter, transport phenomenon in gases-viscosity, coefficient of viscosity, law of equipartition of energy, degrees of freedom and average energy of a molecule, molecular basis of heat capacity, barometric formula and its uses for determination of Avogadro number.

Deviation from ideal behavior, van der Waals and Dieterici's, Virial equation of state, Boyle's temperature, Critical constants, reduced equation of state, co-efficient of compressibility and thermal expansion.

L-8 Marks: 10

Unit II- Liquid

Qualitative treatment of structure of liquids, physical properties of liquids, vapour pressure, surface tension, viscosity, parachor-determination and application, Newtonian and non Newtonian liquid, liquid crystals, qualitative discussion of structure of water. **L -4 Marks: 06**

Unit III – Solids

Basic laws of crystallography, crystal system, crystal lattice, Miller indices, and simple face centered and body centered cubic lattice, number of points in a unit cell.

X-Ray diffraction study of crystals, Bragg's law, determination of crystal structure- introduction to powder and single crystal methods of structure analysis, crystal structure of NaCl and KCl, packing of crystals, closed packed structure, radius ratio, crystal defect-point defects, conductors, semiconductors and insulators from band theory. **L-5 Marks: 10**

Section II Inorganic Chemistry

Marks: 34= (27+7 Int.)

Periodic properties: - Effective nuclear charge (screening constant – Slater's rule only), ionic and covalent radii, ionization potential, electron affinity and electro negativity (Pauling, Mulliken's and Allred-Rochow scales). **L-4 Marks -09**

Bonding and structure: Electrovalent bond, covalent bond, covalent ionic resonance and partial ionic character in covalent bonds, lattice energy, bond length, bond angle and bond energy. VB and MO theories, LCAO and MO diagram of homo and hetero diatomic molecules, VSEPR theory and its applications. **L-10. Marks -18**

Unit IV Electronic spectroscopy

The Beer – Lambert Law, molar absorption coefficient, selection rules for electronic transitions, vibrational structures, Franck-Condon principle, chromophores, auxochromes, bathochromic and hypsochromic shift.

L-7, Marks:08

Unit V Spin resonance spectroscopy

Principle of NMR, Larmour precession, chemical shift and low resolutions spectra, different scales, spin-spin coupling and high resolution spectra, Interpretation of PMR spectra of ethanol, 1- and 2-chloropropane, acetaldehyde, cyanohydrin and 1,2 & 1,3-dichloropropane.

Electron spin resonance (ESR) spectroscopy and its principle, hyperfine structure, ESR of simple free radicals, and copper (II) compounds.

L-12, Marks: 10

Text Books:

- 1) Fundamentals of Molecular Spectroscopy, C.N. Banwell and E.M. McCash, Tata-McGraw Hill
- 2) Molecular Spectroscopy, G.M. Barrow
- c) Spectroscopy, Satyanarayana

Ref. Books:

- 1) Spectroscopy – Vol. I, II & III – Strawghan and Walker (Chapman & Hall)

Paper: MM 608

Project Work

Marks 40 (32+8Int)

In the final semester (Semester VI), students have to carry out project work either at their respective colleges or any other R & D laboratory and University (private, public and govt.) under guidance of a faculty member. The student may start their project work during the Semester Break between 5th and 6th semester.

(Some laboratory work related to Project Work may also be performed during the Semester break between 4th and 5th Semester, if the situation related the lab facility demands).

The area of the work is to be decided by the advisor.

On completion of the project work students have to submit the work in the form of a dissertation followed by oral presentation in the presence of faculty member and an external expert.

Marks 22

Viva voce

Marks 10

Internal assessment

Marks 8

Additional Recommended Books

**DEPARTMENT OF
COMMERCE
DIGBOI COLLEGE**

Course No. : 502 ENTREPRENEURSHIP DEVELOPMENT (ENDT XVIII)

(For B.Com General and six Speciality Courses)

Marks: 80

Hours: 40

Objective: The purpose of this paper is to prepare a group where the students view entrepreneurship as a desirable and feasible career option. In particular, the paper seeks to build the necessary competencies and motivation for a career in entrepreneurship.

Course Contents:

Unit -I: Concept and definition of entrepreneur and entrepreneurship. types of entrepreneur. Matching of situational requirements and types of entrepreneur.

20: 10 hrs

Unit —II: Entrepreneurship and economic development. emergence of Women entrepreneurship in national and global perspective. problems of women entrepreneurship in Assam. Opportunities and challenges of women entrepreneurship. Concept, role, problems and prospects of rural entrepreneurship.

20: 10 hrs

Unit — III: Self- help Groups-objectives, formation. funding and working, Leadership - styles. Theories - The Trait Theory. The Situational Theory, The Free Rein Theory, The followers' Theory, EDP-needs. objectives — weaknesses.

20: 10 hrs

Unit IV: Salient features of Micro Small and Medium Enterprises Development Act 2006, promotional agencies - Micro, Small and Medium Enterprises Development Organisation (MSME) District Industries and Commerce Centre (DI & CC) Khadi and Village Industries Commission / Board (KVIC/ KVIB), HSIIDC, NEDFi, NEITCO.

20:10 hrs

Text and Reference Books:

1. Desai Vasant: Dynamics of Entrepreneurial Development, Himalaya Publishing House, Mumbai.
2. Khanka S.S.; Entrepreneurial Development. S. Chand & Company Ltd., New Delhi
3. Srivastava S.B.; A Practical guide to Industrial Entrepreneurs, S. Chand and Sons. New Delhi.
4. Rajkonwar A.B. Entrepreneurship Development. Kalyani Publishers, Ludhiana.
5. Deb Rana Bijoy: Fundamentals of Entrepreneurship.
6. Kummur: Entrepreneurship: Creating and Leading and Entrepreneurial Organisation, Pearson, New Delhi.
7. Nagendra: Entrepreneurship and Management. Pearson. New Delhi.

DEPARTMENT OF EDUCATION

DIGBOI COLLEGE

Education Major-Practice Teaching

**SYLLABUS FOR THREE YEAR DEGREE COURSE IN SEMESTER SYSTEM:
DIBRUGARH UNIVERSITY, DIBRUGARH – 786004**

SUBJECT: EDUCATION (MAJOR) : FIFTH SEMESTER: PAPER – X

(B) PRACTICE TEACHING

TOTAL MARKS – 50

**(40 Marks for End Semester Written Examination and
10 Marks for Internal Assessment)**

OBJECTIVES:

- 1 To develop few teaching skills in the pupils through micro- teaching.
- 2 To orient students in class room teaching through practice teaching.
- 3 To develop the skill of preparing lesson plan for micro and macro teaching.

COURSE CONTENTS:

**UNIT 1 : PROVIDING KNOWLEDGE ABOUT THE COMPONENTS OF SOME
TEACHING SKILLS AND THEIR PRACTICE THROUGH MICRO TEACHING:**

(10 Marks)

15 Classes

- 1.1 Introducing a lesson
- 1.2 Blackboard writing
- 1.3 Questioning (Fluency in questioning and Probing questioning)
- 1.4 Stimulus variation.
- 1.5 Reinforcement
- 1.6 Explanation.
- 1.7 Achieving closure.

**UNIT II: A MINIMUM LESSON PLAN FROM 3(THREE) CATEGORIES AND 2 (TWO)
FROM EACH CATEGORIES.**

(15 Marks)

10 Classes

- 2.1 Knowledge lesson.
- 2.2 Skill lesson.
- 2.3 Appreciation lesson.

REFERENCES:

- 1 Kochhar, S.K.: *Methods and Techniques of Teaching*, Sterling Publishers Pvt. Ltd.
- 2 Bhatia and Bhatia: *The Principles and Methods of Teaching*.
- 3 Deka K.K. and Hazarika: *Anusikshan*, Banalta, Dibrugarh.
- 5 Goswami, R.K.: *Sikshadanar Paddhati aru Koushal*.
- 6 Kochhar S.K.: *Teaching of Social Studies*.
- 7 Sarma and Sarma: *Teaching of Science*.
- 8 Kochhar, S.K.: *Teaching of Literature*.

NOTE: DISTRIBUTION OF MARKS;

- | | |
|--|---------------|
| 1 Note Book for Units I and II | Marks 5+5=10. |
| 2 Micro-teaching practice (Any one) | Marks 5+5=10. |
| 3 Practice teaching (Macro lesson any one) | Marks 15. |
| 4 Viva | Marks 05. |

DEPARTMENT OF EDUCATION

DIGBOI COLLEGE

Education General- TELG

SIXTH SEMESTER: PAPER – XI

(B) FIELD REPORT

MARKS – 50

(40 Marks for the Final Report and 10 Marks for Internal Assessment)

OBJECTIVES :

1. To acquaint the students with practical knowledge of field work studies.
2. To provide knowledge of preparing a report after a field visit.
3. To familiarize students with the changing educational realities of today's society.

COURSE CONTENTS : A Field Trip, Collection of data from the field and Report Writing should be done on **any one** of the areas given below :

1. Literacy Census
2. Environment Awareness
3. Education for Special Children
4. SSA (Sarva Siksha Abhiyan)
5. Socio economic adjustment
6. Adolescence
7. Any other relevant topic

Note : The following procedure must be followed in the Report Writing:

1. Title
2. Objective
3. Background of the study
4. Methodology
5. Findings of the Study
6. Conclusion

N.B.: Distribution of Marks :

- ✓ Data should be collected from the field.
- ✓ The question paper for the Practical examination shall be set by a Board of Examiners (External and Internal)
- ✓ The question paper must contain a question from **Unit – I of Paper XI – Part A, which will be compulsory for all the students.**
- ✓ The External Examiner will have to evaluate the Field Reports during the End-Semester examination.

25% marks allotted for In-semester evaluation (Internal Assessment) shall be based on Viva-voce by the concerned teacher **at any time during the semester.**

DEPARTMENT OF GEOGRAPHY
DIGBOI COLLEGE

SEMESTER – VI

Paper: GGRG - 602 : PRACTICAL

Total Marks : 40

Unit – I Computer Drawing **Marks – 12**
 Computer map drawing: Boundaries, use of colours, lettering, rivers, roads, railways to show in maps of India, North east India and Assam.

Unit – II Field Report **Marks – 20**
 Field Study: Preparation of a Report on the basis of the data collected from field study

Unit – III Practical note book and Viva-voce **Marks – 8**
 1. Practical Note Book : 5 marks
 2. Viva-voce : 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Work & Practical Geography, DVS Publication, Ghy
3. Mahmood, A. : Statistical Methods in Geography
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
5. Mishra, R.P. : Fundamentals of Cartography

NATIONAL SERVICE SCHEME (NSS)
(SKILL ENHANCEMENT COURSE)
DIGBOI COLLEGE

SUBJECT: NATIONAL SERVICE SCHEME (NSS)

The NSS subject will be offered in the undergraduate programmes of Dibrugarh University as skill based courses with two courses. The total credits will be 4 (each course will be of 2 credits each). It has been developed on the lines of the UGC regulations for Skill Based Courses. The objectives of the NSS (Skill Based Courses) are:

1. To enable NSS volunteers at the undergraduate level to undergo a formal course of study so as to supplement their voluntary work.
2. To equip NSS volunteers with some necessary skills to volunteer better.
3. To help NSS volunteers to look for other avenues of livelihood in the form of entrepreneurial ventures.

Course Code: NSS01

Credit: 2

Course Title: NSS and Youth Development

- Objectives** : The main objectives of this course are:
1. To help learners know about NSS in the context of youth, community and voluntary service.
 2. To appreciate the importance of health, hygiene and sanitation for a healthy nation.
 3. To propagate Yoga as a way of healthy living.
- Credit** : 2 (1 – 0 – 1)
- Outcome** : Learners will have the knowledge about NSS and its role in the fields of health, hygiene and sanitation so as to build a strong country. They will be able to use Yoga for healthy living.

Unit	Topics	Contact Hours		
		Lectures	Tutorials	Practical
1	Introduction to NSS History, philosophy, aims and objectives of NSS; NSS Insignia, Organization of NSS, Funding; Regular Activities; Special Camping; Adopted village; Maintaining records, Collaboration with other Govt. agencies, NGOs	2	0	0
2	Life Competencies & Youth Leadership Definition and importance of life competencies; communication and soft skills; Using the Internet; Youth leadership	3	0	0
3	Health, Hygiene and Sanitation Importance of health, hygiene and sanitation; Various Govt. programmes	2	0	5
4	Youth Health Healthy lifestyles; HIV/AIDS, drugs and substance abuse; First aid	2	0	5
5	Youth and Yoga History and philosophy of yoga; Yoga for healthy living	2	0	12

Total Lectures: 11

Project: 22 hours of community/volunteer work promoting the issues as mentioned in Units 3, 4 and 5. The internal assessment will be based on the project.

Suggested Readings:

1. NSS Manual
2. National Youth Policy Document
3. National Service Scheme - A Youth Volunteers Programme For Under Graduate Students As Per UGC Guidelines by J D S Panwar, A K Jain & B K Rathi (Astral)
4. Communication Skills by N Rao & R P Das (HPH)
5. Light on Yoga by B K Iyenger (Thorsons)

Course Code: NSS02

Credit: 2

Course Name: NSS in Social-economic Development

- Objectives** : The main objectives of this course are:
1. To help learners know about environmental issues and disaster management.
 2. To understand the role of entrepreneurship in social development.
 3. To learn documentation and reporting.

Credit : 2 (1 – 0 – 1)

Outcome : Learners will learn to appreciate the concerns regarding the environment. They will have the background information to start a venture. They will also be able to prepare a socio-economic development plan.

Unit	Topics	Contact Hours		
		Lecture s	Tutorial s	Practical s
1	Environment Issues Environment conservation, Enrichment and Sustainability; Climate Change; Waste Management; Natural Resource Management	2	0	0
2	Disaster Management Introduction; Classification of disasters; Role of NSS in disaster management with more emphasis on disasters specific to NE India; Civil defence	3	0	0
3	Entrepreneurship Definition and meaning; Qualities of a good entrepreneur; Risks; Various policies aiding an entrepreneur	2	0	0
4	Funding a Venture Sources of funding and formalities	2	0	0
5	Documentation and Reporting Collection and analysis of data; Documenting, reporting and their dissemination	2	0	22

Total Lectures: 11

Project: Developing a socio-economic development plan for a selected locality requiring at least 22 hours of work. *The internal assessment will be based on the document that is prepared.*

Suggested Readings:

1. Biodiversity, Environment and Disaster Management by Shamna Hussain (Unique Publishers)
2. Environmental Studies by P K Pandey (Mahaveer Publications)
3. Fundamentals of Entrepreneurship by H Nandan (PHI)
4. Guide to Report Writing by Michael Netzley and Craig Snow (Pearson)

**DEPARTMENT OF
RURAL DEVELOPMENT
DIGBOI COLLEGE**

ELECTIVE

FOURTH SEMESTER PAPER 4.01 (RURAL DEVELOPMENT PROGRAMMES IN INDIA) Marks – 100 (70+10+20)

Objective:

The objective of the paper is to impart knowledge to the learners on various rural development programmes currently operated in India which will enable the learners to assess their achievements.

Unit I: Area based and Beneficiary oriented Programmes, Ongoing Self Employment and Wage Employment programs, Poverty alleviation Programmes.

No. of lecture hours: 9

Marks- 14

Unit II: Rural Infrastructural Development programmes, Programmes relating to Rural Electrification, Rural Transport, Rural Housing, Information and Communication Technology.

No. of lecture hours: 10

Marks- 20

Unit III: Other development programmes- Wasteland Development, Watershed development programmes, social forestry, Community Development Programmes, Development Programmes for SC, ST and Underprivileged Group

No. of lecture hours: 9

Marks- 16

Unit IV: Rural social sector development programmes- Health care and family welfare programmes, NRHM, Development Programmes for Rural Women and Rural children, Janani Suraksha Yojana, National Nutrition Mission, Drinking water and sanitation programmes, NRHM, Sarva Siksha Mission.

No. of lecture hours: 10

Marks- 20

Unit V: Submission of a Report on Rural Development

Each student is to prepare a report (either in English or Assamese) on any aspect of rural development of Assam. The report must be based on primary data collected by student himself/herself from a field study. The data should be presented in tabular form and each table should be analysed by using simple statistical tools of analysis. The report should be completed within 10 to 12 full-scape pages. The completed report with college code and exam role number, registration number of the candidate with year (name of the college and the name of the student should be submitted to principle examination in charge of the centre on any date during the course of examination for onward transmission to the controller of Examination.

Illustration of a few topics/problems on which the report can be prepared by the students:

- 1) Success/failure of a Rural Development programme currently in operation in the area of study.
- 2) Success story of rural entrepreneur/SHG (NGO)
- 3) Identification of rural activity based on locally available resources
- 4) Agriculture marketing
- 5) Rural health and hygiene
- 6) People's (including women) participation in Rural Development.
- 7) (any other)

No. of lecture hours: 8

Marks- 10

Reading list:

1. Singh, Katar. : Rural Development – Principles, Policies and Mangaement, Sage Publications, New Delhi
2. Desai, Vasant. : Rural Development- Programmes and Strategies ,Himalaya Publishing House, Mumbai
3. Sundaram, Satya, I. : Rural Development, Himalaya Publishing
4. Mukundan, N. : Rural Development and Poverty Eradication in India, New Century, New Delhi
5. Karalay, G.N.: Integrated Rural Development, Concept Publishing company

**DEPARTMENT OF POLITICAL SCIENCE
DIGBOI COLLEGE
SEC (HUMAN RIGHTS IN INDIA)**

COURSE CODE: SEC-II (4th or 6th Semester)
COURSE TITLE: HUMAN RIGHTS IN INDIA

1. General course information:

This course is to be taught as General Elective Paper for the Degree of B.A./B.Com/B.Sc. This course will provide the knowledge about human rights in India to the student in a comprehensive manner in one semester of the program.

1.1 **Course title:** Human Rights in India

1.2 **Course code:** B.A./B.Com/B.Sc.

1.3 **Contact hours:** 32

1.4 **Credits:** 2

2. Course objective:

The aim of the course paper is to provide knowledge about human rights to the student in a comprehensive manner:

- To understand the different issues, problems and challenges of human rights in contemporary world.
- To sensitise the students about human rights sufferings and identify the cases of human rights violation so that the students can be aware about the sources of remedies for justice.

3. Course Contents:

Unit	Title/ Content	Lectures
I	Development and Human Rights ,Human Rights Violation by the State agencies; Police and Para-military forces.	8
II	Environmental, Women, Dalit and Tribal Movements in India.	8
III	Persons with disabilities, Rights of Minorities, Rights of Internally displaced persons , Child Labour, and Bonded Labour	8
IV	Human Rights Education, Voluntary Action and the Media, Public Policy, Economic Development , Marginalization and Human Rights	8

4. References:

- Bhambri C.P. : Indian Politics (2000)
- Batra T.S. : Human Rights – A Critique (1992)
- Brass, Paul : Politics of India Since Independence (1995)
- Chandoke, N. : State & Civil Society (1993)

DEPARTMENT OF ZOOLOGY

DIGBOI COLLEGE

SEMESTER-V

A Project work carrying 15 marks be allotted to each student at the beginning of the 5th Semester. The Report to be submitted in the Paper ZooMP- 605 of 6th Semester.

- *The Project report will have to reflect the qualities of scientific investigations (experimental or observational) with specific Title, Aim and Objectives, Review of literature, Material and methods, Collection and analysis of data and its representation, Conclusion and Reference.*

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

Marks: 13 (1A) + 52 (End Sem) = 65

Project Work = 15

Total= 80

30 lecture hours

1. Determination of blood group and Rh factor
2. Preparation and demonstration of ball and stick model of Nucleotides.
3. Detection / estimation of RNA.
4. Immunodiffusion / Blood grouping (Ag-Ab reaction).
5. Study of Blood Cell types in blood smear slides.
6. Histological study of Lymphoid organs.
7. Different e-resources and database search.
8. Similarity search in sequence such as BLAST / FASTA.
9. Creation of databases.

SCHEME OF THE PRACTICAL EXAMINATION:

Time: 6 hrs.

Marks = 52 + 15 (project work) = 67

1. Molecular biology	15
2. Immunology	10
3. Biotechnology and Bioinformatics	7
4. Practical record book	10
5. Viva voce	10
6. Project work	15

total = 67

DIBRUGARH UNIVERSITY
UNDER GRADUATE SYLLABUS UNDER SEMESTER SYSTEM
ZOOLOGY MAJOR PROGRAMME

Objective: The main objective of the course is to provide in-depth knowledge about bio-diversity, their development and interaction with environment. The study of Physiology, Endocrinology, Cell Biology and Molecular Biology has been included to provide in-depth knowledge of the subject courses on instrumentation and techniques including Biostatistics, Biotechnology and Bioinformatics are included to provide the students with recent development in the field of biology.

EXAMINATION:

There shall be 27 (twenty seven) papers; 14 (fourteen) theory and 13 (thirteen) practical papers in zoology. 20% of marks each of theory and practical papers shall be evaluated as Internal Assessment (IA). The distribution of courses and marks will be as follows:

SEMESTER	PAPER	TITLE OF THE PAPER	MARKS		
			IA	End Sem	TOTAL
I	ZooMT- 101	Non-chordate diversity and Systematics	12	48	60
	ZooMP- 102	Practical based on ZooMT- 101	08	32	40
II	ZooMT- 201	Biochemistry	12	48	60
	ZooMP- 202	Practical based on ZooMT- 201	08	32	40
III	ZooMT- 301	Chordate diversity and Comparative Anatomy	12	48	60
	ZooMP- 302	Practical based on ZooMT- 301	08	32	40
	ZooMT- 303	Bioinstrumentation & Biostatistics	12	48	60
	ZooMP- 304	Practical based on ZooMT- 303	08	32	40
IV	ZooMT- 401	Cell Biology, Histology and Histochemistry	12	48	60
	ZooMP- 402	Practical based on ZooMT- 401	08	32	40
	ZooMT- 403	Developmental Biology	12	48	60
	ZooMP- 404	Practical based on ZooMT- 403	08	32	40
V	ZooMT- 501	Genetics and Evolution	12	48	60
	ZooMP- 502	Practical based on ZooMT- 501	08	32	40
	ZooMT- 503	Animal Physiology	12	48	60
	ZooMP- 504	Practical based on ZooMT- 503	08	32	40
	ZooMT- 505	Environmental Biology and Wildlife	12	48	60
	ZooMP- 506	Practical based on ZooMT- 505	08	32	40
	ZooMT- 507	Endocrinology	12	48	60
	ZooMP- 508	Practical based on ZooMT- 507	08	32	40
	ZooMT- 601	Parasitology and Ethology	12	48	60
VI	ZooMP- 602	Practical based on ZooMT- 601	08	32	40
	ZooMT- 603	Molecular Biology and Immunology	12	48	60
	ZooMT- 604	Biotechnology and Bioinformatics	12	48	60
	ZooMP- 605	Practical based on ZooMT- 603 and 604	13	52	65
		Project work	0	15	15
	ZooMT- 606	Economic Zoology	12	48	60
	ZooMP- 607	Practical based on ZooMT- 606	08	32	40
Course Total marks = 1400					