



Common Courses that include Experiential Learning, Project, Field tour (applicable for all Postgraduate Programmes):

1. AECC-1 (Ability Enhancement Compulsory Course)

- A. Environmental Sustainability (3 credits)
- B. Swachha Bharat Abhiyan (2 credits)

Course Objectives:

1. Understand the idea of clean and healthy environment.
2. Promote the idea of Swachh Bharat through practice.
3. Identify the ways of promoting sustainable development.
4. Analyze the relationship between Environment, ethics and development.

2. GE-1 (Generic Elective) Human Rights

Course Objectives:

1. Comprehend the basic concept of Human Rights.
2. Identify various legal frameworks related to human rights in India.

1. M.Sc. Botany

Sem.IV.; MBOTEC-2

Project Dissertation

Course Objectives:

Students should be able to learn how to select and defend a topic of their research, how to effectively plan, execute, evaluate and discuss their experiments. The students are exposed to cutting-edge technologies to achieve a solution and learn to process scientific data using biostatistics. Students should be able to demonstrate considerable improvement in the following areas –

- In-depth knowledge of the chosen area of research.
- Capability to critically and systematically integrate knowledge to identify the issues that must be addressed within the framework of the specific thesis.
- Competence in research design and planning.
- Capability to create, analyze and critically evaluate different technical solutions.
- Ability to conduct research independently.
- Ability to perform analytical techniques/experimental methods.
- Project management skills.
- Report writing skills.
- Problem-solving skills.
- Communication and interpersonal skills.

The course has importance in the areas of academic, research and employability.



2. M.Sc. Chemistry

Sem.IV.

MSCCHE CC-16:- Elective Course (P)

2. (a) Practical (Inorganic Chemistry Special)

Course Outcomes:

1. Type Metal and quantitative analysis of the constituents & mixtures containing the following radicals Fe + Ni, Fe + Ca, Cr + Fe.
2. Students will learn the systematic methods of separation techniques.
3. Apart from inorganic radicals they also learn the separation organic radicals.

2. (b) Practical (Physical Chemistry Special)

Course Outcomes:

This practical course give training to students on important electrochemical techniques namely,

1. Conductometry, potentiometry, voltametry and polarography.
2. In addition, they are introduced to nuclear and radiation chemistry experiments.
3. This course enhances the skill of students in quantitative analysis.

2. (c) Practical (Organic Chemistry Special)

Course Outcomes:

1. Student will gain the in-depth knowledge and skill in organic separations.
2. Purifications, qualitative analyses.
3. Separation of organic compounds using chemical methods from organic mixtures.
3. Students will learn preparation of suitable derivatives.

3. M.Sc. Physics

Sem.-I

MPHYCC-4: LAB 1

Course Objectives:

1. To make the student familiarized with the basics of experimental physics.
2. To enable the students to explore the concepts involved in the thermodynamics and heat.
3. To make the student understand the basic concept in modern optics.
4. To allow the student to understand the fundamentals of instruments involved.

Course Outcome:

1. The student should have knowledge of the different experimental techniques.
2. The student should have understood the basics of physics involved in experiments.
3. The student should be able to apply the concepts of physics and do the interpretation and acquire the result.



Sem.-II

MPHYCC-5: MODELING AND SIMULATION

Course Objectives:

1. To encourage students to “discover” in a way how physics learn by doing research.
2. To address analytically intractable problems in physics using computational tools.
3. To enhance the various computational technique with programming in Fortran/C++/Python/Java to face the world of problems using high performance iteration techniques.
4. To show how physics can be applied in a much broader context than discussed in traditional curriculum.

Course Outcome:

1. Learn how to interpret and analyze data visually, both during and after computation.
2. Gain an ability to apply physical principles to real-world problems.
3. Acquire a working knowledge of basic research methodologies, data analysis and interpretation.
4. Understand various simulation techniques which can be used in future by students to analyse the data.

Sem.-II

MPHYCC-9: Lab – II

Course Objectives:

1. To encourage students to “discover” in a way how physics learn by doing research.
2. To address analytically intractable problems in physics using computational tools.
3. To enhance the various computational technique with programming basic in C to face the world of problems using high performance iteration techniques.
4. To show how physics can be applied in a much broader context than discussed in traditional curriculum.

Course Outcome:

1. Understand the basic idea about finding solutions using computational methods basics.
2. Learn how to interpret and analyze data visually, both during and after computation.
3. Gain an ability to apply physical principles to real-world problems.
4. Acquire a working knowledge of basic research methodologies, data analysis and interpretation.
5. Realize the impact of physics in the global/social context.



Sem.-III

MPHYCC-14: Lab III

Course Objectives:

1. To make the student familiarize with the basics of electronics.
2. To enable the student to explore the concept involved in the oscillators.
3. To make the student understand the basic concepts in IC and digital devices.
4. To allow the student to understand the fundamentals of multivibrators.

Course Outcome:

1. The student will have knowledge on the different experimental techniques involved in electronics.
2. The student should be able to independently construct the circuit.
3. The student should be able to apply the concepts of electronics and do the interpretation and acquire the result.

4. M.Sc. Zoology

Sem.-I

CC-4:(Practical)

Course Outcome:

1. Prepare and demonstrate Polytene chromosomes from Chironomus/ Drosophila larvae.
2. Calculate mitotic index by preparing slides from onion root tip and study stages of meiosis by preparing slides from grasshopper testes.
3. Enumerate RBC and WBC (TC and DC) by preparing blood smear and prepare slides of invertebrates larvae to show detailed structure.
4. Solve problems related to concept of Mendelian principle of Inheritance, Sex-linked and Pedigree of Human.

Sem.-II

CC-9: (Practical)

Course Outcome:

1. Determine the salivary amylase activity. Estimate glucose, urea, uric, acid, or albumen in a given sample by colorimetry. Separate amino acids by paper chromatography.
2. Use the reagents such as PAS, Alcian Blue, Sudan Black B, Sudan III/IV, Feulgen, Methyl green- Pyronin and mercury bromophenol for histochemical demonstration.
3. Measure pH and estimate dissolved O₂, free CO₂, carbonate and bicarbonate alkalinity and total hardness.

EC – 2 D: - Entomology (Practical)

Course Outcome:

1. Dissect grasshopper or honeybee or wasp to expose and investigate its general anatomy and nervous system.
2. Prepare permanent slides of different parts of insects.



EC – 1 C: - Environmental Biology

Course Outcome:

1. Understand the ecosystem and population ecology, community ecology & succession.
2. Concept of Biodiversity and its conservation, wildlife management (project tiger and biosphere reserves).
3. Discuss the Environmental pollution and environmental health, Climate change, Ozone depletion, acid rain, toxic substances in the environment.

EC – 2 C: - Environmental Biology

Course Outcome:

1. Studies of soil fauna and analysis of Physico-chemical.

5. M.A. Economics

Sem.-IV

CC-16 Elective Course – 2 (Group –I) PROJECT WORK

Course Outcomes:

1. A student who studies this paper should be analytical and wherever he or she works, will help to interpret the data for research as well as development in the society.
2. This will not only enhance their employability but also prepare them for future challenges.
3. This course is basically tailored to meet this current lacuna in the research in applied economics.

6. M.A. History

Sem. II

AEC-1: Archive and Museum

Course Outcomes:

1. Students will learn new kinds of Archive and Museum through case study.

7. M.A. Psychology

Semester IV (Even Semester)

Elective course -1 & 2

CC – 15 & 16:

A. Specialisation in Organizational Behaviour papers 1&2

Course Outcomes:

1. Introduce the nature, scope, and approaches in organizational behaviour.
2. Develop an understanding of individual behaviour in organizations.
3. Understand the group behaviour and leadership in organizations.
4. Gather knowledge about organizational change and development to estimate the



challenges of organizations.

B. Specialisation in Clinical Psychology

Course Outcomes:

1. Review the classic and contemporary thinkers in clinical psychology.
2. Interpret psychotherapy: concept, goals, scope, and process of assessment.
3. Understand the application and implementation of different psychotherapy.
4. Illustrate the current trends and future directions in clinical psychology.

C. Specialisation in Psychometrics

Course Outcomes:

1. Highlight the antecedents and current trends in psychological assessment.
2. Express the steps of test and scale construction.
3. Illustrate the applications of psychological testing in different areas.
4. Outline the professional, moral and ethical issues in testing.

D. Specialisation in Positive Psychology

Course Outcomes:

1. Highlight the concept of positive psychology.
2. Understand the positive psychology in Cultural and Social context.

E. Computer applications in Psychology

Course Outcomes:

1. Acquainted with use of software in psychology.

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