

FACULTY OF LIFE SCIENCES

Syllabus for the

Subject: Zoology

For the award of the Degree in

Master of Science (Chemistry)

(Credit Based Continuous Evaluation Grading System under NEP 2020)

(SEMESTER: II)

Session: 2026-27



Kanya Maha Vidyalaya, Jalandhar (Autonomous)

The Heritage Institution

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF TWO-YEAR DEGREE PROGRAMME

(Under Credit Based Continuous Evaluation Grading System) (CBCEGS)

Scheme for Master of Science (Chemistry)

Session 2026-27

Master of Science (Chemistry) Semester-II										
Course Code	Course Name	Course Type	Hours Per Week	Credits	Total Credits	Marks				Examination time (in hours)
						Ext.		CA	Total	
				L-T-P		L	P			
MCHL-2056	Chemistry of Living Systems	C	2	2-0-0	2	35	-	15	50	3

Master of Science (Chemistry) Semester-II (Session-2026-27)

Course Title: Chemistry of Living Systems

COURSE CODE: MCHL-2056

(For Non-Medical Students)

(Theory)

Course Outcomes

After passing this course the student will be able to:

- CO1. Gain knowledge about the biomolecules and cell structure.
- CO2. Understand different types of tissues.
- CO3. Understand Mendelian laws, structure of DNA and gene expression.
- CO4. Understand Whittaker's system of classification and structure of virus.

Master of Science (Chemistry) Semester-II (Session-2026-27)

Course Title: Chemistry of Living Systems

COURSE CODE: MCHL-2056

(For Non-Medical Students)

(Theory)

Time: 3 Hrs.

Max. Marks: 50

L-T-P: 2-0-0

Theory: 35

CA: 15

Note: The students are allowed to use Non-Programmable Calculator.

Instructions for the Paper Setter

Eight questions of equal marks (7 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from unit I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

UNIT-I

The Organization of Life

Biologically important molecules: Carbohydrates, lipids, proteins and nucleic acids.

The life of cells – The cell theory, general characteristics of cells, difference between prokaryotic and eukaryotic cells, difference between plant and animal cells, cell organelles.

UNIT-II

Tissues, organs and organ systems: Animal tissues; epithelial tissues, connective tissues, muscle tissue, nervous tissue and neoplasias; plant tissue: meristematic tissue, permanent tissues.

UNIT-III

Genetics

The basic principle of heredity: Mendel's law, monohybrid cross, dihybrid cross.

DNA – Double helix structure and replication.

Genes expression: Transcription and translation, genetic code.

UNIT-IV

The Diversity of Life

The classification of Living things – Criteria of classification, Whittaker's systems of classification, their characteristics with an example of each.

Viruses, structure of Viruses.

Book Recommended:

1. Cord Biology - South Western Educational Publications, Texas, 200