

CMJ UNIVERSITY
SHILLONG, MEGHALAYA.
Recognized by UGC

DETAILED SYLLABUS

Under Graduate Diploma Program
Nutrition and Dietetics

(YEARLY SYSTEM)

COURSE TITLE : DIPLOMA IN NUTRITION & DIETETICS
DURATION : 1 YEAR

TOTAL DIPLOMA MARKS: 800

FIRST SEMESTER

<i>COURSE TITLE</i>	<i>Paper Code</i>	<i>MARKS</i>		
		THEORY	PRACTICAL	TOTAL
BIOMEDICAL CHEMISTRY	DND-110 DND-110/ P	50	50	100
CELLS, TISSUES & ORGANISMS	DND-120 DND-120/P	50	50	100
COMPUTER SKILLS	DND-130	100	00	100
HUMAN BEING IN HEALTH & ILLNESS	DND-140	100	00	100
STRUCTURE OF THE HUMAN BODY	DND-210 DND-210P	50	50	100
COMMUNICATIONS SKILLS	DND-220	100	00	100
FOOD CHEMISTRY	DND-230	100	00	100
HUMAN NEUROBIOLOGY	DND-240	100	00	100

Note:

Theory Paper: 30% Continuous Internal Assessment and 70% University examination.

Practical Paper: 30% Continuous Internal Assessment and 70% University examination.

Continuous Internal Assessment:

- 1) Two or three tests out of which minimum two Assessment will be considered for Assessment 60% of Continuous Internal
- 2) Seminars/Assignments/Quizzes 30% of Continuous Internal Assessment
- 3) Attendance, class participation and behavior 10% of Continuous Internal Assessment

FIRST YEAR

DND-110

BIOMEDICAL CHEMISTRY

Maximum Time : 3 Hrs. University Examination :35
Total Marks : 50 Continuous Internal Assessment: 15
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

Introduction to the chemistry of organic molecules and the biochemistry of cells. The role of functional groups in biological molecules of biomedical importance. Common reactions in metabolism. Ionisation and the concept of pH. Proteins as biological polymers. Physical properties of proteins in solution. Enzyme catalysis and kinetics. Biological oxidation and cellular energetics. The mitochondrial electron transport chain. Structure and metabolism of lipids and polysaccharides

DND-110P

BIOMEDICAL CHEMISTRY

The laboratory course will comprise of exercises on what is learnt in the theory classes of the same course i.e. DND110

DND-120**CELLS, TISSUES & ORGANISMS**

Maximum Time : 3 Hrs. University Examination :35
Total Marks : 50 Continous Internal Assessment:15
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

The chemical constituents of living cells and biological reactions. Cell structure and function. Animal diversity and evolution. Functional systems. The relevance of the microbial world in biomedical science. Tools for studying cells including histology, different types of microscopy, tissue culture and specialised cell staining techniques.

DND-120P**CELLS, TISSUES & ORGANISMS**

The laboratory course will comprise of exercises on what is learnt in the theory classes of the same course i.e. DND120

DND-130

COMPUTER SKILLS

Maximum Time : 3 Hrs. University Examination :70
Total Marks : 100 Continous Internal Assessment: 30
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

Hardware & Software: CPU, RAM, SSD, Operating Systems, System Softwares, Application Software. Inside Computers. Computer Systems.
Input-Output devices: Monitor, Keyboard, Mouse, System Unit, Printer, Scanner.
Storage devices : Floppy disk, Hard disk, Cartridge tape, CD-ROM
Printers : Dot-Matrix, Inkjet, Laserjet, Colour printer, High speed printer, Label printer, Plotters.

PROGRAMMING LANGUAGE:-Compiler, Assembly Language, Machine Language.
Graphical user interface : Windows 3x, Program manager, Main & accessories program groups, Multitasking.

DND-140

HUMAN BEING IN HEALTH & ILLNESS

Maximum Time : 3 Hrs. University Examination :70
Total Marks : 100 Continuous Internal Assessment:30
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

The complex relationships between health and illness and behaviour of the individual, beginning with an introduction to concepts of health and psychological well-being, illness, disease and disability. Normal and abnormal reactions to illness are covered and students will study an individual with a chronic medical condition. Physical, cognitive, emotional and behavioural reactions are considered, and the biological factors and psychological processes - such as perception, learning, memory, cognition and emotion - that underlie these. The impact of behaviour - particularly habits - on health and well-being is covered, as well as illness prevention and health promotion.

DND-210

STRUCTURE OF THE HUMAN BODY

Maximum Time : 3 Hrs. University Examination :70
Total Marks : 50 Continuous Internal Assessment:30
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

An introduction to human anatomy and histology, the concept of primary tissues, the embryology of the nervous, cardio-respiratory, gastrointestinal and musculoskeletal systems. . Practical histology classes including microscopic examinations of the organisation of cells and extracellular material in a range of tissues. Correlation classes compare and contrast the normal anatomy associated with these systems with that associated with common human diseases, eg cardiac infarction, stroke, brain tumours, cancer of the lung and colon.

DND-210P

CELLS, TISSUES & ORGANISMS

The laboratory course will comprise of exercises on what is learnt in the theory classes of the same course i.e. DND 210

DND-220

COMMUNICATION SKILLS

Maximum Time : 3 Hrs. University Examination :70
Total Marks : 100 Continuous Internal Assessment:30
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

Basic Skills: - Listening, Speaking, Reading and Writing.

Comprehension: - Reading Comprehension, Passages, Poems.

Listening Comprehension: - Talks, Reports, Poems

Writing Skills: - Paragraph Writing, Composition Writing, Report Writing, Application & Letter Writing

Grammar: - Simple, Compound and complex sentences, Co-ordinate clause (with, but or either-or, Neither-Nor otherwise or else), Subordinate clauses-noun clauses-as subjects object and complement: Relative Clauses (restrictive and non-restrictive clauses). Adverb clauses (open and hypothetical, Comparative Clauses

Simple present, progressive and present perfect, simple past, progressive and past perfect, indication of futurity, the passive (Simple present and past, present and past perfect and 'to' infinitive structure), Reported Speech: - (I) Declarative sentences, (ii) Imperatives (iii) Interrogatives –question, Yes/No Questions, Exclamation sentences, Modals (will, shall, should, would, ought to, have to/have got to, can, could, may-might and need), Verb structures (infinitives and gerundial)

DND-230

FOOD CHEMISTRY

Maximum Time : 3 Hrs. University Examination :70
Total Marks : 100 Continuous Internal Assessment:30
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

The chemical nature of food will be examined. Substances examined will include carbohydrates, fats, proteins, minerals and water as well as colours, flavours, vitamins, preservatives, trace metals, additives and synthetic and natural toxins. Links between food intake and energy intake are established to provide a basis for determining dietary needs. The chemistry of colloids and emulsions is examined since some foods are mixtures of hydrophobic substances and water. Methods of determining the composition of raw materials and end products are included. Consideration of the processes of digestion will emphasise the energy provided through consumption of food.

DND-240

HUMAN NEUROBIOLOGY

Maximum Time : 3 Hrs. University Examination :70
Total Marks : 100 Continuous Internal Assessment:30
Minimum Pass Marks : 40%

A) Instructions for paper-setter

1. The question paper will be divided into two parts. Part-I will contain subjective questions. This part will carry 60% of the total marks.
2. Part-II will comprise of 10-15 short questions, which will cover the entire syllabus and will carry 40% of the total marks.

B) Instructions for the candidates

1. Candidates are required to attempt Part-I as defined in the question paper and the entire part-II.
2. Use of non-programmable scientific calculator is allowed

COURSE CONTENTS

Introductory course on the human nervous system. Components and organization of the nervous system. Methods of studying the human brain. Neural communication and integration. Principles of sensory perception. How movement is initiated and controlled. Autonomic control of bodily functions. Learning and memory. High order functions such as consciousness, sleep and language.