

School of Health Sciences

CSJM University, Kanpur

Ordinance & Syllabus

for

B.Sc. in Hospital Administration

(B.Sc.-HA)

Ordinance according to

NEP-2020

Duration: 3 years & 06 Months

(Six Semesters & 06 Months Internship)

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B.Sc. in Hospital Administration

ORDINANCE

Chapter

"A"

Background :

A Hospital Administration Professional is one of the key positions in a healthcare organization responsible for management of Hospital and various health related information of patient generated within the healthcare system. Hospital Administration professional involves maintaining, collecting, analysing protecting and disseminating traditional and digital medical information essential for delivery of quality care. The World Health Organization stated that the proper collection, management and use of information within the healthcare systems will determine the system's effectiveness in detecting health problems, defining priorities, identifying innovative solutions and allocating resources to improve health outcomes.

Objective of the curriculum

The aim of the recommended curriculum is to produce Hospital Administration professionals who understand the:

- Definition and characteristics of 'Good' Medical Record
- Values of 'Good' Medical Record to various users
- Required Characteristics of entries in medical Records
- Responsibility for Medical Record Quality Management a health care setup very well.

They should be able to manage:

- A health care setup.
- Source-oriented, Problem-oriented, and Integrated Health Information Management
- Medical Record Forms and their Content
- Standard Order of Arrangement of Medical Record forms
- Analysis of Medical Record-Quantitative & Qualitative and Incomplete Record Control

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1. B.Sc.-Hospital Administration degree will be under the **faculty of Medicine** of C.S.J.M. University, Kanpur.

2. Duration of Course :

- B.Sc.-Human Nutrition course will be a full time course.
- Duration will be Three years (06 Semesters) followed by Compulsory 06 months internship.

3. No. of Seats :

Total no. of Students to this course - **40**.

4. Admission.

Eligibility Criteria:

For admission in this course candidate has to pass 10 + 2 (Any discipline) conducted by any Board or University incorporated by law and recognized by this University with minimum 40% marks (relaxation of 5% marks for SC/ST student).

Mode of Admission:

As per the University Norms.

5. Medium of instruction:

English shall be the medium of instruction in the class and in the University examination.

6. Method of Teaching:

The method of teaching adopted shall be a combination of lectures, demonstrations and practicals by the full time faculty, visiting or part time or guest faculty.

7. Examination:

- As per the University norms

Duration of Examination:

- Each theory paper shall be of three-hours duration OR as per the University norms.

8. Attendance to appear in the end semester examination :

The permission to appear in end semester examination shall be granted to such candidate only who have fulfill the condition of 75% attendance in each subject separately in theory and practical as per the university rule.

Regarding attendance requirements students will have to fulfill the condition of 75% attendance. 15% relaxation in attendance, in exceptional circumstances can be made by the Vice Chancellor on the recommendation of the Director/Coordinator/Head of the Institute/Department.

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SCHEME OF EXAMINATION

B.Sc. in Hospital Administration First Semester University Examination

S. No.	Subjects	Subject code	THEORY MARKS			PRACTICAL MARKS			Total marks
			Theory Paper	Internal Assessment	Total	Practical	Internal Assessment	Total	
1	Fundamentals of Anatomy & Physiology-I	BHA-101	75	25	100	75	25	100	200
2	Fundamentals of Clinical Biochemistry-I	BHA-102	75	25	100	75	25	100	200
3	Medical Terminology & Medical Jurisprudence	BHA-103	75	25	100	-	-	-	100
4	General Pathology	BHA-104	75	25	100	75	25	100	200
5	General Microbiology	BHA-105	75	25	100	75	25	100	200
Grand Total									900

B.Sc. in Hospital Administration Second Semester University Examination

S. No.	Subjects	Subject code	THEORY MARKS			PRACTICAL MARKS			Total marks
			Theory Paper	Internal Assessment	Total	Practical	Internal Assessment	Total	
1	Fundamentals of Anatomy & Physiology-II	BHA-201	75	25	100	75	25	100	200
2	Fundamentals of Clinical Biochemistry-II	BHA-202	75	25	100	75	25	100	200
3	Introduction to Health Care Delivery System in India	BHA-203	75	25	100	-	-	-	100
4	Introduction to Patient Safety	BHA-204	75	25	100	-	-	-	100
Grand Total									600

B.Sc. in Hospital Administration Third Semester University Examination

S. No.	Subjects	Subject code	THEORY MARKS			PRACTICAL MARKS			Total marks
			Theory Paper	Internal Assessment	Total	Practical	Internal Assessment	Total	
1	Fundamentals of Management	BHA-301	75	25	75	-	-	-	100
2	Health Information Management-1	BHA-302	75	25	75	-	-	-	100
3	Hospital Organization & Administration	BHA-303	75	25	75	-	-	-	100
4.	Research Methodology	BHA-304	75	25	75	-	-	-	100
Grand Total									400

B.Sc. in Hospital Administration Fourth Semester University Examination

S. No.	Subjects	Subject code	THEORY MARKS			PRACTICAL MARKS			Total marks
			Theory Paper	Internal Assessment	Total	Practical	Internal Assessment	Total	
1	Biostatistics	BHA-401	75	25	100	-	-	-	100
2	Health Information Management-II	BHA-402	75	25	100	-	-	-	100
3	Medical Law & Ethics	BHA-403	75	25	100	-	-	-	100
4.	Quality Assurance in health care	BHA-404	75	25	100	-	-	-	100
Grand Total									400

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B.Sc. in Hospital Administration Fifth Semester University Examination

S. No.	Subjects	Subject code	THEORY MARKS			PRACTICAL MARKS			Total marks
			Theory Paper	Internal Assessment	Total	Practical	Internal Assessment	Total	
1	Human Resource Management	BHA-501	75	25	100	-	-	-	100
2	Fundamentals of Health Informatics & Data Security	BHA-502	75	25	100	-	-	-	100
3.	Health Care policies and standards	BHA-503	75	25	100	-	-	-	100
4	Health Care Financing	BHA-504	75	25	100	-	-	-	100
									400

B.Sc. in Hospital Administration Sixth Semester University Examination

S. No.	Subjects	Subject code	THEORY MARKS			PRACTICAL MARKS			Total marks
			Theory Paper	Internal Assessment	Total	Practical	Internal Assessment	Total	
1	Hospital Accounting and Financial Accounting	BHA-601	75	25	100	-	-	-	100
2	Health Insurance and Billing design	BHA-602	75	25	100	-	-	-	100
3	Medical Transcription and Telemedicine (Elective)	BHA-603	75	25	100	-	-	-	100
	Community Medicine (Elective)	BPT-603							
4.	Project Work	BHA-604	-	-	-	75	25	100	100
Grand Total									400

INTERNAL ASSESSMENT

- It will be for theory and practical both.
- It will be done through the whole semester.
- Candidate must obtain at least 40% marks in theory and practicals separately in internal assessment to be eligible for the semester university examination.

- **Internal assessment (Theory)** will be done as follows:

- | | | |
|--------------|--|-------------------|
| a) | Mid-term/ class test etc. | = 10 marks |
| b) | Assignments/Project/Quiz/ Presentations etc. | = 10 marks |
| c) | Attendance | = 05 marks |
| Total | | = 25 marks |

- **Internal assessment (Practical)** will be done as follows:

- | | | |
|--------------|---|-------------------|
| a) | Laboratory Manual/Assignments/Class test etc. | = 10 marks |
| b) | Day to day performance/continuous evaluation/record etc | = 10 marks |
| c) | Attendance | = 05 marks |
| Total | | = 25 marks |

CRITERIA FOR PASSING

- As per the University Norms.

DIVISION:

- As per the University Norms.

INTERNSHIP

- A candidate will have to undergo internship for a period of six calendar months in a medical college/hospital equipped with modern facilities which fulfills the norms decided by the University.

DEGREE:

- The degree of B.Sc. in Hospital Administration (B.Sc.-HA) course of the University shall be conferred on the candidates, who have pursued the prescribed course of study for not less than six semesters and have passed examinations as prescribed under the relevant scheme and completed 6 months of compulsory rotatory internship.

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COURSE OF STUDY

B.Sc. in Hospital Administration First Semester University Examination

S.No.	Subjects	Subject Code	Minimum Teaching hours			Credit Hours
			Theory	Practical	Total	
1	Fundamentals of Anatomy & Physiology-I	BHA-101	40	40	80	4
2	Fundamentals of Clinical Biochemistry-I	BHA-102	60	60	120	6
3	Medical Terminology & Medical Jurisprudence	BHA-103	40	-	40	2
4	General Pathology	BHA-104	40	40	80	4
5.	General Microbiology	BHA-105	40	40	80	4

B.Sc. in Hospital Administration Second Semester University Examination

S.No.	Subjects	Subject Code	Minimum Teaching hours			Credit Hours
			Theory	Practical	Total	
1	Fundamentals of Anatomy & Physiology-II	BHA-201	60	60	120	6
2	Fundamentals of Clinical Biochemistry-II	BHA-202	40	40	80	4
3	Introduction to Health Care Delivery System in India	BHA-203	80	-	80	4
4	Introduction to Patient Safety	BHA-204	80	-	80	4
5.*	Training at Hospital		60	60	120	4

*Not included for university examination.

B.Sc. in Hospital Administration Third Semester University Examination

S.No.	Subjects	Subject Code	Minimum Teaching hours			Credit Hours
			Theory	Practical	Total	
1	Fundamentals of Management	BHA-301	80	-	80	4
2	Health Information management-1	BHA-302	80	-	80	4
3	Hospital Organization & Administration	BHA-303	80	-	80	4
4	Research Methodology	BHA-304	80	-	80	4
5.	Training at Hospital/Seminar/ Presentations/Participation in Camps*				160	4
					Total	20

*Not included for university examination.

B.Sc. in Hospital Administration Fourth Semester University Examination

S.No	Subjects	Subject Code	Minimum Teaching hours			Credit Hours
			Theory	Practical	Total	
1	Biostatistics	BHA-401	80	-	80	4
2	Health Information Management-II	BHA-402	80	-	80	4
3	Medical Law & Ethics	BHA-403	80	-	80	4
4	Quality Assurance in health care	BHA-404	80	-	80	4
5.	Hospital Posting (In a medical college/well- equipped hospital for at least one month)*				160	4
					Total	20

*Not included for university examination.

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B.Sc. in Hospital Administration Fifth Semester University Examination

S.No.	Subjects	Subject Code	Minimum Teaching hours			Credit Hours
			Theory	Practical	Total	
1	Human Resource Management	BHA-501	80	-	80	4
2	Fundamentals of Health Informatics & Data Security	BHA-502	80	-	80	4
3	Health Care policies and standards	BHA-503	80	-	80	4
4.	Health Care Financing	BHA-504	80	-	80	4
5.	Hospital Posting (In a medical college/well-equipped hospital for at least one month)*				160	4
					Total	20

B.Sc. in Hospital Administration Sixth Semester University Examination

S.No	Subjects	Subject Code	Minimum Teaching hours			Credit Hours
			Theory	Practical	Total	
1	Hospital Accounting and Financial Accounting	BHA-601	80	-	80	4
2	Health Insurance and Billing design	BHA-602	80	-	80	4
3	Medical Transcription and Telemedicine (Elective)	BHA-603	80	-	80	4
	Community Medicine (Elective)	BPT-603				
4	Project Work	BHA-604	-	160	160	8
5.	Hospital Posting (In a medical college/well-equipped hospital for at least one month)*	-			160	4
					Total	24

*Not included for university examination.

INTERNSHIP

- There shall be six months of Internship after the final semester examination for candidates declared to have passed the examination in all the subjects.
- During the internship candidate shall have to work full time average 7 hours per day (each working day) for 6 Calendar months.
- Each candidate is allowed maximum of 6 holidays during entire Internship Program and in case of any exigencies during which the candidate remains absent for a period more than 6 days, he/she will have to work for the extra days during which the candidate has remained absent.
- The Internship should be rotatory and cover all departments of the hospital.
- Based on the attendance and work done during posting the Director/Principal/ head of institution/department shall issue 'Certificate of Satisfactory Completion' of training following which the University shall award the B.Sc. in Hospital Administration Degree or declare the candidate eligible for the same.
- **No candidate shall be awarded degree without successfully completing six months' internship.**
- Institution, shall have to satisfy itself that satisfactory infrastructure facilities of Pathology Laboratory exist in the Institute / Hospital where the internship training has to be undertaken. Following parameters / guidelines have been suggested:
 - a. It is mandatory for the Institution to have its own well equipped and modern pathology laboratory.
 - b. Senior Pathologist should manage the pathology laboratory in the Institutes/Hospitals.
- Teaching Institute's Director / Principal/ Head can at his/her discretion may grant NOC to the students to do the Internship at the place of his/her choice provided the concerned Hospital/Pathology Laboratory fully satisfies the above criteria. For the purpose of granting NOC the candidate shall have to submit to the Institution the status of Pathology Laboratory services available at the place where he/she intends to do his Internship.

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B.Sc. in Hospital Administration - First Semester

Fundamental of Anatomy & Physiology-I

Subject Code: BHA-101

Min. Hrs - Theory: 40 Hrs. & Practical: 40 Hrs.

Objectives

- Students will be able to learn the terminology of the subject.
- To Provide basic knowledge of cells, tissues, blood and to understand anatomy and physiology of human body.
- This subject will develop an understanding of the structure and function of organs and organ systems in normal human body.

THEORY

Anatomy

1. General Anatomy

- Introduction & Subdivisions of Anatomy
- Anatomical Nomenclature planes, Positions, Body Parts & Movements.
- Cell - structure & function
- Tissue
 - Epithelium
 - Connective
 - Sclerous
 - Muscular
 - Nervous
- Lymphatic System

Physiology

1. Cell : Structure & function

2. Blood

- Blood cells
- Haemoglobin
- Blood groups
- Coagulation Factors
- Anaemia & Immunoglobulins

3. Cardiovascular system

Heart rate, cardiac cycle, cardiac output, blood pressure, hypertension, radial pulse

4. Respiratory System

- Ventilation
- Functions
- Lungs Volumes and capacities

5. Gastrointestinal System

Process of digestion in various parts

PRACTICAL

Anatomy

1. Identification and description of all anatomical structures.
2. The learning of Anatomy by demonstration only through dissected parts, slides, models, charts etc.

Physiology

1. Measurement of pulse, blood pressure.
2. Elicitation of Reflexes & jerks.
3. Identification of blood cells by study of peripheral blood smear.

Text Books

1. Rizzo, Donald C. (2015). *Fundamentals of Anatomy and Physiology*. 4th ed. Florence, AL: Cengage Learning.
2. B.D. Chaurasiya (2022). *Human Anatomy*, 9th Ed., CBS Publication.

Reference Books

1. Gray, Henry. (2013). *Grays Anatomy*. London, England: Arcturus Publishing.
2. Hall, J. E. (2015). *Guyton and hall textbook of medical physiology* (13th ed.). W B Saunders.
3. Moore, K. L., Dalley, A. F., & Agur, A. (2017). *Clinically oriented anatomy* (8th ed.). Lippincott Williams and Wilkins.

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B.Sc. in Hospital Administration - First Semester

FUNDAMENTALS OF CLINICAL BIOCHEMISTRY-I

Subject Code: BHA-102

Min. Hrs. - Theory: 60 Hrs. & Practical: 60 Hrs.

Course Objective

- To enable the student to understand the chemical characteristics of different classes of nutrients.
- To explain the process of digestion, absorption and metabolism of macronutrients and micronutrients.

Course Outcome

- The student will have knowledge of biochemical pathways of different nutrients, how they function biochemically and physiologically.
- The student will get information about the role of diet and the nutrients present in them.

THEORY

1. **Basics of energy metabolism, nutrition & dietetics** -Unit of measuring energy, calorific value of food, BMR & factors affecting it, SDA of food, calculation of energy requirement, balanced diet, nutrition in health & diseases (protein energy malnutrition).
2. **Chemistry of carbohydrates & their related metabolism** - Introduction, definition, classification, biomedical importance Brief outline of metabolism: Glycogenesis & glycogenolysis (in brief), Glycolysis, citric acid cycle & its significance, HMP shunt & Gluconeogenesis (in brief), regulation of blood glucose level.
3. **Amino acids** - Definition, classification, essential & non-essential amino acids.
4. **Chemistry of Proteins & their related metabolism** - Introduction, definition, classification, biomedical importance Metabolism: Transformation, Decarboxylation, Ammonia formation & transport, Urea cycle.
5. **Chemistry of Lipids & their related Metabolism**-Introduction, definition, classification, biomedical importance, essential fatty acids, identification of fats & oils (saponification no, acid no, iodine no, acetyl no, reichert- miesel no. etc.) Brief out line of metabolism: Beta oxidation of fatty acids, Ketosis, Cholesterol & it's clinical significance, Lipoproteins in the blood composition & their functions in brief, Atherosclerosis.
6. **Enzymes**-Introduction, definition, classification, coenzymes, isoenzymes, properties, factors affecting enzyme action, enzyme inhibition, diagnostic value of serum enzymes - Creatinine kinase, Alkaline phosphatase, Acid phosphatase, LDH, SGOT, SGPT, Amylase, Lipase, Carbonic anhydrase etc.
7. **Acid base balance concepts & disorders** - pH, Buffers, Acidosis, Alkalosis

PRACTICALS

1. Biomedical Waste Management
2. Laboratory Organization – Glassware, Plastic-ware, Instruments etc.
3. Identification of Carbohydrates (qualitative tests).
4. Identification of Proteins
5. Estimation of Glucose in urine by Benedict's method.

Text Books

1. D M Vasudevan, (2011), Text book of Medical Biochemistry, 6th edition Jaypee Publishers
2. M N Chatterjea & Rana Shinde, (2012), Text book of Medical Biochemistry, 8th edition, Jaypee Publications

Reference Books

1. Singh & Sahni, (2008), Introductory Practical Biochemistry, 2nd edition, Alpha science
2. Lehninger, (2013), Principles of Biochemistry, 6th edition, W H Freeman
3. U Satyanarayan, (2008), Essentials of Biochemistry, 2nd edition, Standard Publishers

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B.Sc. in Hospital Administration - First Semester

Medical Terminology & Medical Jurisprudence

Subject Code: BHA-103

Min. Hrs. - Theory: 40 Hrs.

Objectives

This course introduces the elements of medical terminology. Emphasis is placed on building familiarity with medical words through knowledge of roots, prefixes, and suffixes. Topics include: origin, word building, abbreviations and symbols, terminology related to the human anatomy, reading medical orders and reports, and terminology specific to the student's field of study. Spelling is critical and will be counted when grading tests.

Outcome :

On the completion of this course, the students will be able:

- To know the elements of medical words.
- To develop sense of correctness of medical terms.
- To gain an understanding of standard medical abbreviations.
- To understand the relationship between medical terms and their synonyms in common usage.
- To spell correctly the medical terms, to detect the meaning of unfamiliar medical terms, by analysis into their elements, and to follow directions given in medical phraseology
- To appreciate the logical order of medical terms, the exactness of concepts in medical terms, and the importance of medical terminology consciousness and continuous study

Unit-I

- 1- Introduction
2. Basic Elements of Medical Terms - Root, Prefixes, Suffixes, Colours, Numeral, Symbols, Abbreviation.
3. Terms pertaining to Body as a whole.

Unit-II: Terms relate to investigations and operation, treatment of conditions, disorders of -

- a) Skin and Breast (integumentary system)
- b) Musculoskeletal
- c) Neurological and psychiatric disorder
- d) Cardio-vascular
- e) Blood and blood forming organs
- f) Respiratory
- g) Digestive
- h) Uro-genital
- i) Gynecological
- j) Maternal, Antenatal and Neonatal conditions.
- k) Endocrine and Metabolic
- l) Sense organs - Vision & Hearing
- m) Systemic: Infections, diseases, Immunological diseases, diseases of the connective tissue.
- n) Geriatrics and Psycho geriatrics.

Unit-III: Supplementary terms: Selected terms relating:

- a) Oncology
- b) Anesthesiology
- c) Physical Medicine and Rehabilitation
- d) Nuclear medicine.
- e) Plastic surgery of burns and maxillofacial surgery
- f) Radio- Diagnosis
- g) Radiotherapy

Unit-IV : Medical Jurisprudence

- a) Introduction
- b) Legal procedure, medical law and ethics

Text Books

1. Cohen B.J & Taylor J.J, (2013), Memmler's Structure and function of the Human body, 13th Ed., Lippincott Williams & Wilkins.
2. Dr. Singh, (2014), Anatomy and physiology for Nurses and allied health science, Current Ed., Ahuja Book Publishers & Distributor.

Reference Books

1. Linda Stanhope and Kimberly Turnbull (2017) Introduction to Medical Terminology, First Edition, Precision Exams.
2. Carol Schroeder, Laura Ehrlich, Katrina Schroeder, Ann Ehrlich, (2016), Medical Terminology for Health Professions, 8th edition, Cengage Health Care.

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B.Sc. in Hospital Administration - First Semester

GENERAL PATHOLOGY

Subject Code: BHA-104

Min. Hrs - Theory: 40 Hrs. & Practical: 40 Hrs.

Objectives:

- To provide general insight into the history and basics of General Pathology.
- To Impart knowledge about general outline of pathology.
- To provide brief knowledge about basic procedure done in pathology laboratory.

THEORY

1. Cell Injury and Cellular Adaptations.

- a) Normal Cell
- b) Cell Injury- types of cell injury, etiology of cell injury, morphology of cell injury, cellular swelling.
- c) Cell death: types- autolysis, necrosis, apoptosis & gangrene.
- d) Cellular adaptations-atrophy, hypertrophy, hyperplasia & dysplasia.

2. Inflammation

- a) Acute inflammation - vascular event, cellular event, inflammatory cells.
- b) Chronic Inflammation - general features, granulomatous inflammation, tuberculoma.

3. Hemodynamic Disorders:

Edema, hyperemia, congestion, hemorrhage, circulatory disturbances, thrombosis, ischemia & infarction.

4. Neoplasia:

Definition, how does it differ from hyperplasia, Feature of Benign Tumor and Malignant Tumor
difference between benign tumor and malignant tumor.

5. Healing

Definition, different phases of healing, factors influencing wound healing.

PRACTICAL

1. Components & setting of the Compound microscope.
2. Focusing of object.
3. Use of low & high power objectives of microscope.
4. Use of oil immersion lens.
5. Care and Maintenance of the microscope.
6. Different types microscopy
 - Dark field microscopy
 - Fluorescence Microscopy
7. Electron Microscopy in brief.

Text Books

1. Robbins and Cortran, (2020), Pathologic Basis of Disease, First Vol., 10th Ed., South Asia.
2. Praful B. Godkar & Darshan P. Godkar (2014). Text Book of Medical Laboratory Technology, Clinical Laboratory Science & Molecular Diagnosis, 3rd Ed., Bhalani Publishing House.
3. Harsh Mohan, (2018), Harshmohan Text Book of Pathology, 8th Ed., J.P. Brothers.
4. Kumar, V., Abbas, A. K., & Aster, J. C. (2017). Robbins Basic Pathology (10th ed.). Elsevier - Health Sciences Division.

Reference Books

1. S. Kim. Suvarna, Christopher, Lyton and John D. Bancroft, (2019), Bancroft's Theory and Practice of Histological Techniques, 8th Ed., Elsevier.
2. CFA Culling, (2013), Handbook of Histopathological and Histochemical Techniques, 3rd Ed., Elsevier.
3. Campbell James Todd, (2016), Tood-Sandford-Davidsohn Clinical Diagnosis and Management by Laboratory Methods, 16th Ed., Saunders.

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B.Sc. in Hospital Administration - First Semester

GENERAL MICROBIOLOGY

Subject Code: BHA-105

Min. Hrs - Theory: 40 Hrs. & Practical: 40 Hrs.

Objectives:

- To provide knowledge of bacteria, Sterilization etc.

THEORY

1. **General characters and classification of Bacteria.**
2. **Characteristics of Bacteria**
Morphology- Shape, Capsule, Flagella, Inclusion, Granule, Spore.
3. **Growth and Maintenance of Microbes**
Bacterial division, Batch Culture, Continuous culture, bacterial growth- total count, viable count, bacterial nutrition, oxygen requirement, CO₂ requirement, temperature, pH, light.
4. **Sterilization and Disinfection.**
Physical agents- Sunlight, Temperature less than 100°C, Temperature at 100°C, steam at atmospheric pressure and steam under pressure, irradiation, filtration.
Chemical Agents- Alcohol, aldehyde, Dyes, Halogens, Phenols, Ethylene oxide.
5. **Culture Media**
Definition, uses, basic requirements, classification, Agar, Peptone, Transport Media, Sugar Media, Anaerobic Media, Containers of Media, Forms of Media
6. **Staining Methods**
Simple, Grams staining, Ziehl-Neelsen staining or AFB staining, Negative Impregnation
7. **Collection and Transportation of Specimen**
General Principles, Containers, Rejection, Samples- Urine, Faeces, Sputum, Pus, Body fluids, Swab, Blood.
8. **Care and Handling of Laboratory Animals**
Fluid, Diet, Cleanliness, Cages, ventilation, Temperature, Humidity, handling of Animals, Prevention of disease.
9. **Disposal of Laboratory/Hospital Waste**
Non-infectious waste, Infected sharp waste disposal, infected non-sharp waste disposal.

PRACTICAL

1. Preparation of swabs/sterile tubes & bottles.
2. Preparation of smear.
3. Staining.: Gram & Ziehl -Neelsen staining.
4. Identification of Culture media.
5. Identification of instruments.
6. Identification of common microbes.

Text Books

1. Ananthanarayan R. and Paniker C.K.J. (2009) Textbook of Microbiology. 8th edition, University Press Publication
1. Praful B. Godkar & Darshan P. Godkar (2014). Text Book of Medical Laboratory Technology, Clinical Laboratory Science & Molecular Diagnosis, 3rd Ed., Bhalani Publishing House.
2. Mahon, C. R., Lehman, D. C., & Manuseelis, G. (2014). Textbook of diagnostic microbiology (5th ed.). Saunders.
3. D.R. Arora (2020). Text Book of Microbiology, 6th Ed., CBS Publishers.

References Books

1. Stefan (2020), Jawetz Melnick Adelbergs Medical Microbiology, 28th Ed., MacGraw Hill.
2. Robbins and Cortran, (2020), Pathologic Basis of Disease, First Vol., 10th Ed., South Asia.
3. Sastry Apurba S, (2021), Essentials of Medical Microbiology, 3rd Ed., Jay Pee Publishers.

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B.Sc. in Hospital Administration - Second Semester

FUNDAMENTALS OF ANATOMY & PHYSIOLOGY-II

Subject Code: BHA-201

Min. Hrs. - Theory :60 Hrs. & Practical: 60 Hrs.

Objectives:

- To provide knowledge about terminology and comprehensive knowledge of Human Anatomy & Physiology.

THEORY

Anatomy

1. Systemic

Basic Features of:

- Cardiovascular system
- Respiratory system
- Digestive system
- Excretory system
- Genital (Male & Female) system
- Nervous system

Physiology

1. Endocrinology

- List of Endocrine Glands
- Hormones: Their secretion and functions (in brief)

2. Excretion system

- Structure of nephron
- Urine formation

3. Central Nervous System

- Parts
- Sliding Filament Theory
- Neuro Muscular Junction
- Wallerian Degeneration
- Motor Nervous system
 - Upper motor neuron system
 - Lower motor neuron system

f) Sensory nervous system

- Sympathetic Nervous system
- Parasympathetic nervous system

4. Skin - Function & Structure

5. Muscular System

Classification of muscles & their functions

6. Special Senses - Eye & ear (in brief)

- ##### 7. Reproductive System – Structure & Function of male & female reproductive organs, menstruation, puberty, menopause, fertilization & Development of fertilized ovum, placenta & its function.

PRACTICAL

Anatomy

- Demonstration of skeleton - articulated and disarticulated.
- Demonstration of dissected parts (upper extremity, lower extremity, thoracic & abdominal viscera, face and brain).

Physiology

- Measurement of pulse, blood pressure.
- Elicitation of Reflexes & jerks.
- Identification of blood cells by study of peripheral blood smear.

Text Books

- B.D. Chaurasiya (2022). Human Anatomy, 9th Ed., CBS Publication.
- Rizzo, Donald C. (2015). *Fundamentals of Anatomy and Physiology*. 4th ed. Florence, AL: Cengage Learning.
- Ghai's (2022). Ghai's Text Book of Practical Physiology, 10th Ed., J.P. Brothers.

Reference Books

- Gray, Henry. (2013). *Grays Anatomy*. London, England: Arcturus Publishing.
- Hall, J. E. (2015). *Guyton and hall textbook of medical physiology* (13th ed.). W B Saunders.
- Moore, K. L., Dalley, A. F., & Agur, A. (2017). *Clinically oriented anatomy* (8th ed.). Lippincott Williams and Wilkins.

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B.Sc. in Hospital Administration - Second Semester

FUNDAMENTAL OF CLINICAL BIOCHEMISTRY-II

Subject Code: BHA-202

Min. Hrs. - Theory :40 Hrs. & Practical: 40 Hrs.

Course Objective

- To explain the hormones, vitamins, Diabetes Mellitus etc.

Course Outcome

- The student will be able to understand the hormones, Vitamins, hyperglycemia, Liver function tests etc.

THEORY

1. **Hormones** -Classification, general mode of action, hormones of Pituitary, Thyroid, Parathyroid, Adrenals, Reproductive Glands, Pancreas, hormonal disorders, counter regulatory hormones.
2. **Vitamins**-Water & fat soluble vitamins, sources, requirement, biochemical functions & deficiency disorders.
3. **Water Metabolism**-Distribution of fluids in the body, ECF, ICF, Water metabolism, dehydration.
4. **Hyperglycaemia & hypoglycaemia-Diabetes mellitus** - definition, types, features, gestation diabetes mellitus, glucose tolerance test, glycosuria, Hypoglycaemia & its causes.
5. **Liver functions and their assessment based on –**
 - a) Carbohydrate metabolism
 - b) Protein metabolism
 - c) Lipid Metabolism
 - d) Measurements of serum enzyme levels
 - e) Bile pigment metabolism: Jaundice - its types and their biochemical findings.
 - f) Renal functions tests
 - g) Various tests, GFR & clearance.
6. **Tumour markers & their clinical applications** -Including onco foetal antigens, CEA etc.
7. **General concepts & functions of immunoglobulins.**

PRACTICALS

1. Urine analysis – normal & abnormal constituents of urine.
2. Glucose tolerance test & Glycosylated haemoglobin.

Text Books

1. D M Vasudevan, (2011),Text book of Medical Biochemistry,6th edition Jaypee Publishers
2. M N Chatterjea & Rana Shinde,(2012),Text book of Medical Biochemistry,8th edition, Jaypee Publications
3. Godkar.B. Praful,(2016) Textbook of MLT,3rd edition,Bhalani Publications

Reference Books

1. Singh & Sahni,(2008),Introductory Practical Biochemistry,2nd edition, Alpha science
2. Lehninger,(2013),Principles of Biochemistry,6th edition, W H Freeman
3. U Satyanarayan,(2008), Essentials of Biochemistry,2nd edition, Standard Publishers

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B.Sc. in Hospital Administration- Second Semester

INTRODUCTION TO HEALTH CARE DELIVERY SYSTEM IN INDIA

Subject Code: BHA-203
Min. Hrs. - Theory :80 Hrs.

The course provides the students a basic insight into the main features of Indian health care delivery system and how it compares with the other systems of the world. Topics to be covered under the subject are as follows:

1. Introduction to healthcare delivery system
 - a. Healthcare delivery system in India at primary, secondary and tertiary care
 - b. Community participation in healthcare delivery system
 - c. Health system in developed countries.
 - d. Private Sector
 - e. National Health Mission
 - f. National Health Policy
 - g. Issues in Health Care Delivery System in India
2. National Health Programme- Background objectives, action plan, targets, operations, achievements and constraints in various National Health Programme.
3. Introduction to AYUSH system of medicine
 - a. Introduction to Ayurveda.
 - b. Yoga and Naturopathy
 - c. Unani
 - d. Siddha
 - e. Homeopathy
 - f. Need for integration of various system of medicine
4. Health scenario of India- past, present and future
5. Demography & Vital Statistics
 - a. Demography – its concept
 - b. Vital events of life & its impact on demography
 - c. Significance and recording of vital statistics
 - d. Census & its impact on health policy
6. Epidemiology
 - a. Principles of Epidemiology
 - b. Natural History of disease
 - c. Methods of Epidemiological studies
 - d. Epidemiology of communicable & non-communicable diseases, disease transmission, host defense immunizing agents, cold chain, immunization, disease monitoring and surveillance.

Text Books

1. Yuehwern Yih, (2011), Handbook of Healthcare Delivery Systems, 1st Ed., CRC Press.
2. Gyani J Girdhar, (2017), Handbook Of Healthcare Quality & Patient Safety, 2nd Ed., Jaypee Publishers.

Reference Books

1. David R. Zimmerman , etc. , Peggy Zimmerman , Charles Lund ,(1996), Healthcare Customer Service Revolution: The Growing Impact of Managed Care on Patient Satisfaction, Irwin Professional Publishing.
2. James M. Parish, MD, (2015), The Patient Will See You Now: The Future of Medicine is in Your Hands, 1st Ed., Basic Books: New York,

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B.Sc. in Hospital Administration - Second Semester

INTRODUCTION TO PATIENT SAFETY

Subject Code: BHA-204

Min. Hrs. - Theory :80 Hrs..

Objectives:

- To provide knowledge to students to understand the basic concepts of quality in health Care and develop skills to implement sustainable quality assurance program in the health system.
- To sensitize students in basic emergency care, Infection prevention & control with knowledge of Bio-medical waste management.

THEORY

1. Quality assurance and management -

- a. Concepts of Quality of Care
- b. Quality Improvement Approaches
- c. Standards and Norms
- d. Quality Improvement Tools
- e. Introduction to NABH guidelines in brief.

2. Bio medical waste management and environment safety- The aim of this section will be to help prevent harm to workers, property, the environment and the general public. Topics to be covered under the subject are as follows:

- a. Definition of Biomedical Waste
- b. Waste minimization
- c. BMW – Segregation, collection, transportation, treatment and disposal (including color coding)
- d. Liquid BMW, Radioactive waste, Metals / Chemicals / Drug waste
- e. BMW Management & methods of disinfection
- f. Modern technology for handling BMW
- g. Use of Personal protective equipment (PPE) and Monitoring & controlling of cross infection (Protective devices)

3. Infection prevention and control - The objective of this section will be to provide a broad understanding of the core subject areas of infection prevention and control and to equip AHPs with the fundamental skills required to reduce the incidence of hospital acquired infections and improve health outcomes. Concepts taught should include –

- a. Evidence-based infection control principles and practices such as sterilization, disinfection
- b. Hospital acquired infections – Factors influencing infection, susceptible patients, Hospital Environment, Therapeutic Procedures, Drug Resistance, Transfusion, Advances in medical progress, sources of infection-exogenous/endogenous.
- c. Microorganism-Modes of transmission, Hospital infections and causative organisms.
- d. Urinary Tract Infection, Respiratory infection, Wound and Skin sepsis, Bacterimia, septicaemia.
- e. Diagnosis and control.
- f. Prevention
- g. Infection Control Policy

4. Antibiotic Resistance-

- a. History of Antibiotics
- b. Mechanism of action of antibiotics- interference with cell wall synthesis, action on cytoplasmic membrane, inhibiting protein synthesis, inhibitors of transcription, inhibitors of translation, inhibiting DNA function, metabolic antagonist.
- c. Anti-microbial drugs – Penicillin, Cephalosporin, Aminoglycosides, Tetracycline, Macrolides, Clindamycin, Lincomycin, Vancomycin, Quinolones, Sulphonamides.
- c. Antitubercular drugs, metronidazole
- d. Antibiotic resistance
- e. Mechanism- permeability, production of enzymes, structural target, altered metabolic pathway.
- f. Genetic basis of resistance-chromosomal and extra chromosomal.

5. Disaster preparedness and management- The objective of this section will be to provide knowledge on the principles of on-site disaster management. Concepts to be taught should include-

- a. Fundamentals of emergency management,
- b. Psychological impact management,
- c. Resource management,
- d. Preparedness and risk reduction.

Text Books

1. Liam Donaldson, Walter Ricciardi (2021). Textbook of Patient Safety and Clinical Risk Management, Springer.
2. Gridhar J Gyani, Alexander Thomas (2017). Handbook of Healthcare Quality & Patient Safety, Jaypee Brothers.

Reference Books

1. Ronda G Hughes, PhD, MHS, RN. (2008). Patient Safety and Quality, 8th Ed., [Agency for Healthcare Research and Quality \(US\)](#).
2. Stefan (2020), Jawetz Melnick Adelbergs Medical Microbiology, 28th Ed., MacGraw Hill.
3. Mahon, C. R., Lehman, D. C., & Manuselis, G. (2014). Textbook of diagnostic microbiology (5th ed.). Saunders.
4. Avedis Donabedian (2003). An Introduction to Quality Assurance in Health Care, 1st Ed.

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B.Sc. in Hospital Administration -Third Semester

FUNDAMENTALS OF MANAGEMENT

Subject Code: BHA-301

Min. Hrs. - Theory: 80 Hrs..

Introduction to Management

- Importance of Management
- Definition of Management
- Characteristic features of Management
- Roles of Management
- Role of a Manager
- Levels of Management and their functions
- Process of Management
- Managerial skills
- Management and Administration Management – Science or an Art? Management – a profession?

Principles of Management

- Meaning of principle
- Nature of Management principles
- Need for Management principles
- Scientific Management
- Administrative Management
- Human Relation Movement
- Modern Management approaches

Coordination

- Distinction between coordination and cooperation
- Need for coordination
- Requisites for excellent coordination
- Types & Techniques of coordination
- Difficulty of coordination

Planning

- Nature of Planning
- Importance of Planning
- Forms of Planning
- Types of Plans
- Steps in Planning
- Limitations of Planning
- Making planning effective

Decision Making

- Meaning
- Types of decisions
- Steps in Rational decision-making
- Difficulties in decision-making

Organization

- Meaning
- Why study organizations?
- Process of organizing
- Span of Management
- Principles of organizing
- Departmentalization

Communication

- Importance of communication
- Purposes of communication
- Formal communication
- Forms of communication
- Informal communication
- The communication process
- Barriers to communication
- Principles of effective communication
- Communication networks in a working group

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- Checks on in-plant communication
- Communication in Indian industries

Training and Development

- Meaning
- Advantages
- Types of training programmes
- Training methods

Performance Appraisal

- Purposes
- Essentials of a good performance appraisal system
- Criteria for performance appraisal
- Performance Appraisal methods

Promotions

- Meaning
- Requirements of a sound promotion policy •
Merit vs Seniority
- Designing a seniority system

Directing

- Definition
- Requirements of effective direction
- Giving orders Motivation
- Meaning, definition
- Nature and characteristics of motivation
- Importance and benefits • Types of motivation
- Various theories
 - o McGregor's
 - o Maslow's
 - o Herzberg's
- Wage Incentive Plan

Mentoring

- Meaning, Role of a mentor
- Importance, Steps
- Conditions necessary for effective mentoring system
- Types
- Hurdles

Leadership

- Meaning
- Role of a leader
- Leadership theories

Professional Practice in Health Information Management

Text Books

1. Prasad L M, (2019) Principles and Practice of Management – Sultan Chand & Sons, New Delhi.
2. Rao V S P, (2015), Management- Text & Cases, Excel Books, New Delhi.

Reference Books

1. Heinz Weinrich & Harold Koontz, (2009), Essentials of Management-Tata McGraw Hill, New Delhi.
2. C B Gupta (1997), Principles of Management, 10th Ed., Mayoor Paperbacks.

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B.Sc. in Hospital Administration -Third Semester

Health Information Management-I

Subject Code: BHA-302

Min. Hrs. - Theory: 80 Hrs.

I. Characteristics of quality Medical Records:

- Definition, Characteristics of 'Good' Medical Record
- Values of 'Good' Medical Record to various users
- Required Characteristics of entries in medical Records
- Source-oriented, Problem-oriented, and Integrated medical records
- Medical Record Forms and their Content
- Standard Order of Arrangement of Medical Record forms
- Analysis of Medical Record-Quantitative & Qualitative
- Incomplete Record Control

II. Medical Records for different patient encounters with health care facility

- Ambulatory Care Records [Emergency & Outpatient Records]
- Clinical Records in Long Term Care and Rehabilitation Facilities
- Mental Health Records

III. Filing Methods, Storage, and Retention

- Numbering and Filing Systems
- Filing
- Storage- Microfilming and Disk Storage
- Retention
- Registers & Indexes
- Record movement control & Tracking system

IV. Organizational Aspects of Medical Record Department/Services

- Policies
- Functions
- Location, Space and Layout
- Equipment • Forms Designing and Control
- Medical Records Flow and Processing

XV. Organizational Aspects of the Centralized Admitting Services

- Principles of Identification of a Patient
- Methods of Collection of Identification Data
- Types of Central Admitting Services
- Admitting Policies
- Procedure Outlines for Admissions
- Flow of Records following Admissions
- Advantages of good Admitting Policies and Procedures
- Pre-requisites for smooth & efficient functioning of the Centralized Admitting Services

XVI. Medical Record Department Management

- Planning, Organizing, Directing and Controlling
- Personnel
- Principal Responsibilities and Duties of the Medical Record Administrator/Director
- Tools of Management in the Hands of the Medical Record Administrator/Director

Text Books

1. K. Park (2021), Preventive and social Medicine, 26th Ed., Banarsidas Bhanot Publishers.
2. GD Mogli (2017), Medical Records organization and management, 2nd Edit., Jaypee Publisher.

Reference Books

1. Avdesh Gupta & Anurag Malik, (2007), Management Information System, 2nd Ed., Laxmi Publications.

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2. Davis, G. B. and M. H. Olson (1998), Management Information Systems-Conceptual Foundations, Structure and Development, Vol.7 No.14, TMH,

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B.Sc. in Hospital Administration -Third Semester

Hospital Organization & Administration

Subject Code: BHA-303

Min. Hrs. - Theory: 80 Hrs.

HOSPITAL ORGANIZATION

1. General Introduction to Hospitals

- a) History and Evolution of Hospitals
- b) New Trends in Hospitals

2. Definition of Hospital

- a) Objectives of Hospital
- b) Parameters of Good Medical Care/Patterns of Patient Care.
- c) Functions of Hospital

3. Role of a Hospital in Health Delivery Systems

4. Classification of Hospitals

5. Hospitals Organization and its analysis

- a) Chart of organization
- b) Board and committees
- c) Duties and responsibilities thereof

6. Departmental Administration

- a) Delegation
- b) Decentralization

7. Patient Care Appraisal (PCA)

- a) History of medical audit
- b) Tools and techniques
- c) Various Phases of medical audit

8. Introduction to various departments of Hospital

- a) Clinical departments
- b) Diagnostic and therapeutic services (including clinical laboratories, radiology, physical medicine and rehabilitation and pharmacy services).
- c) Nursing department
- d) Dietary department
- e) Outpatient department
- f) Accident and emergency services department
- g) Medical social service department
- h) General and medical stores
- i) Blood bank
- j) Medical library services

9. Service Unit: Laundry, housekeeping

10. Miscellaneous Service : Engineering, mortuary and transport services.

HEALTH PLANNING & MANAGEMENT

1. Planning - Introduction, objectives, targets & goals, planning cycle (in brief)
2. Management - Introduction, methods & techniques (in brief)
3. National Health Policy .
4. Health planning in India - Five year plans & eleventh five year plan.

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B.Sc. in Hospital Administration -Third Semester

Research Methodology
Subject Code: BHA-304
Min. Hrs. - Theory: 80 Hrs.

Objectives

- Understand the basic principles of research and methods applied to draw inferences from the research findings.
- To be made aware of the need of biostatistics and understanding of data and sampling methods in pathology lab.

THEORY

Research Methodology

1. Research in physiotherapy

- Introduction
- Research for Physiotherapist: Why? How? And When?
- Research – Definition, concept, purpose, approaches
- Internet sites for Physiotherapist

2. Research Fundamentals

- Define measurement
- Measurement framework
- Scales of measurement
- Pilot Study
- Types of variables
- Reliability & Validity
- Drawing Tables, graphs, master chart etc

3. Writing a Research Proposal, Critiquing a research article

- Defining a problem
- Review of Literature
- Formulating a question, Operational Definition
- Inclusion & Exclusion criteria
- Forming groups
- Data collection & analysis
- Results, Interpretation, conclusion, discussion
- Informed Consent
- Limitations

4. Research Design

- Principle of Designing
- Design, instrumentation & analysis for qualitative research
- Design, instrumentation & analysis for quantitative research
- Design, instrumentation & analysis for quasi-experimental research
- Design models utilized in Physiotherapy

5. Research Ethics

- Importance of Ethics in Research
- Main ethical issues in human subjects' research
- Main ethical principles that govern research with human subjects
- Components of an ethically valid informed consent for research

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B.Sc. in Hospital Administration-Fourth Semester

BIostatISTICS

Subject Code: BHA-401

Min. Hrs. - Theory: 80 Hrs.

Objectives

- To be made aware of the importance of biostatistics in quality laboratory management.
- To evaluate patient data and assess calibration and control in pathology.

BIostatISTICS

1. Biostatistics

- Introduction
- Definition
- Types
- Application in Physiotherapy

2. Data

- Definition
- Types
- Presentation
- Collection methods

3. Measures of central value

- Arithmetic mean, median, mode. Relationship between them
- Partitioned values- Quartiles, Deciles, Percentiles
- Graphical determination

4. Measures of Dispersion

- Range
- Mean Deviation
- Standard Deviation

5. Normal Distribution Curve

- Properties of normal distribution
- Standard normal distribution
- Transformation of normal random variables.
- Inverse transformation
- Normal approximation of Bioaxial distribution.

6. Correlation analysis

- Bivariate distribution:
- Scatter Diagram
- Coefficient of correlation
- Calculation & interpretation of correlational coefficient
- T-test, Z-test, P-value

7. Regression analysis

- Lines of regression
- Calculation of Regression coefficient
- Sampling distribution
- Standard error
- Types I & II error

9. Probability (in Brief)

10. Hypothesis Testing

- Null Hypothesis
- Alternative hypothesis
- Acceptance & rejection of null Hypothesis
- Level of significance

11. Parametric & non parametric tests

- Chi square test
- Mann-Whitney U test
- Wilcoxon Signed test
- Kruskal-Wallis test
- Friednam test
- T-test/student T test
- Analysis of variance

Text Book:

1. B.L Agarwal, Basic statistics , New Age International Publication.2012.

Reference Books:

1. Sundarrao, Introduction to biostatistics and Research Methodology, CBS, 1Ed, 2002.
2. C.R Kothari, Research methodology, New Age international publication, 3Ed, 2014.

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B.Sc. in Hospital Administration - Fourth Semester

Health Information Management-II

Subject Code: BHA-402

Min. Hrs. - Theory: 80 Hrs.

Intradepartmental and Interdepartmental Relationships

- Developing Intradepartmental Relationship
- Developing Interdepartmental Relationships with various Departments of the Hospital

XVIII. Quality Management

- External and Internal Pressures for quality
- Quality Assessment and Quality Improvement
- Quality Assurance & Medical Care Evaluation
- Utilization management
- Peer Review
- Utilization review processing & outcomes of Utilization management
- Risk management program [Organization & Operation
- International Standards Organization [ISO], Quality Council of India, & National Accreditation Board of Hospitals [NABH]

XIX. Health Care Statistics, Quality control of Data Collection & Presentation

- Incomplete Record Control
- Inpatient census and rates computed from it.
- Ambulatory care statistics
- Long term Care Statistics
- Processing and reporting of Reproductive Health Statistics
- Reporting of Notifiable Diseases to Public Health Authorities

XX. Nomenclatures and Classification Systems:

- Standard Nomenclatures of diseases (SNDO)
- Current Medical Information Terminology
- Systematized Nomenclature of Pathology (SNOP)
- Systematized Nomenclature of Medicine (SNOMED)
- Common Procedures Coding System (HCPCS)
- Current Procedural Terminology
- International Classification of Functioning, Disability and Health (ICF)
- Case-Mix Classifications
- Diagnosis Related Groups
- ICD – 9 (CM)
- ICD – 10
- ICD- Oncology (ICD - O)

XXI. Medico-Legal Aspects of Health Information Management

- Medical Ethics, Hippocratic Oath, and Code of Ethics for the Medical Record Professionals
- Ownership of the Medical Record
- Privileged Communication and confidentiality of Medical Records
- Release of Information: To the Patient, To Authorized Persons /Agencies Legal Implications of release of Information to unauthorized, Persons/Agencies.
- Consents: Different types and their validity, invalidity blanket, and improper consents.
- Corrections in identification data medical documentations
- Rights and responsibilities of patients
- Medical Record in a Court of Law
- Legal requirements in Retention of Medical Records

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B.Sc. in Hospital Administration - Fourth Semester

MEDICAL LAW & ETHICS

Subject Code: BHA-403

Min. Hrs. - Theory: 80 Hrs.

Medico-Legal Aspects of Health Information Management

- Medical Ethics, Hippocratic Oath, and Code of Ethics for the HIM Professionals
- Ownership of the Medical Record
- Privileged Communication and confidentiality of Medical Records
- Release of Information: To the Patient, To Authorized Persons /Agencies Legal Implications of release of Information to unauthorized, Persons/Agencies.
- Consents: Different types and their validity, invalidity blanket, and improper consents.
- Corrections in identification data medical documentations
- Rights and responsibilities of patients
- Medical Record in a Court of Law
- Legal requirements in Retention of Medical Records

Medical Ethics & Consumer Protection Act

This course is designed to provide Medical Record professionals, an advanced knowledge of structure of Indian Judicial system, Basics of Medical laws, Matters relating to Medical Negligence, Medical Ethics and Consumer Protection Act.

This course will equip students with general skills needed in guiding medical professionals to follow required standards of medical documentations to protect the welfare of the health care institution and the patients.

Laws relating to Hospital Administration:

1. Structure of Indian Judicial System: Subordinate courts - Various Tribunals - High court and Supreme court - their working relationships and effect of orders
2. Medico – legal cases: IPC – Medical Termination of Pregnancy Act 1971, Transplantation of Human Organs Act.
3. Law of Contract: Patient as a consumer - Law of Tort - Composition of D.C.D.R.F, S.C.D.R.C and N.C.D.R.C - powers, terms and jurisdiction, enforcement of orders.
4. Medical Negligence: Negligence - Medical Negligence - Contributory Negligence - Gross Negligence - Criminal Negligence - Onus of Proof - Prevention of such Negligence.
5. Liability and Compensation: Vicarious Liability - Liability of Medical Professionals and Para-medical staff - Quantum of Compensation - Applicability of provisions of Consumer Protection Act for various institutions.
6. Consumer Protection Act 1986: Various provisions - structure, powers and jurisdiction of various forums constituted in C.P Act - orders - how enforced.
7. Consent: Consent - Medical Consent - various types of Consent - Consent forms - “informed Consent” in clinical trials - Consent as a process - full proof methods for proper Consent - various defects in obtaining Consent.
8. Important case studies: District Forums, State Consumer Disputes Redressal Commission - National Consumer Disputes Redressal Commission Case study as how cases were decided.
9. Medical Council of India: The medical council Act – Rules and regulations pertaining to management and functioning of medical records department, management of patient information and generation of various hospital statistics.

Healthcare Policies & Standards

- Knowledge of applicable health law, regulations, accreditations standards, and certification requirements.
- Ability to evaluate compliance and develop compliant organisational policy
- Implement compliance auditing methods and techniques
- Implement ICT systems in compliance with applicable laws, regulations, standards and requirements

Text Book

1. Elaine Lynne, Management in Health Care, Macmillan Publisher, 3rd Edition,2000.

Reference Books

1. Willam A. Reinke, Health Planning for Effective Management, Oxford University Press, 1stEdition, 1996
2. Madhavan Nair, Education Methods, Jaypee, 4thEdition, 2009

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B.Sc. in Hospital Administration - Fourth Semester

Quality Assurance in Health Care

Subject Code: BHA- 404

Min. Hrs. - Theory: 80 Hrs.

Subject covers diverse perspectives in quality management and regulation including relevant research and management methodologies of quality, cost and access to healthcare with a focus on the role of health information management.

Overview of performance improvement, methods and applications in the area of outcomes research including practice variation, risk adjustment, quality measures and quality management (or quality improvement), practice guidelines, evidence-based medicine, clinical decision support, health-related quality of life, utility assessment, economic evaluations (including cost- effectiveness studies).

Text Books

1. S.K Joshi, (2014), Quality Management in Healthcare, 2nd Ed, Jaypee Publishers.
2. Asish Bhatnagar , (2012), A Text on Total Quality Management, 1 Ed., Vrinda Publication.

Reference Books

1. CM Francis & Mario C Desouza , (2019), Hospital administration, 3rd Ed., Jaypee Publishers.
2. Syed Amin Tabish, (2001), Hospital & Health Services Administration Principles & Practice, 13th Ed., Oxford.

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B.Sc. in Hospital Administration-Fifth Semester

Human Resource Management

Subject Code: BHA- 501

Min. Hrs. - Theory: 80 Hrs.

This subject introduces the principles of managing people and other organizational resources. Students will learn how to plan, organize, lead, and evaluate human resources. Topics include: management and leadership, motivations, team building, communication, productivity, performance appraisal, recruitment, job development, training, performance improvement, and revenue cycles.

Topics to be covered include:

Understand staffing levels and productivity standards

- Perform productivity calculations
- Knowledge of labor/employment laws
- Awareness of human resources structure and operations
- Principles of human resources management
- Able to apply techniques/practices related to recruitment, supervision, retention, counseling, disciplinary action
- Knowledge of employment laws, labor laws (local and national)
- Plan workforce education and training programs
- Monitor relevant labor trends and market analysis
- Monitor and benchmark performance standards
- Plan professional development for self and others

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B.Sc. in Hospital Administration, Fifth Semester

Fundamentals of Health Informatics & Data Security

Subject Code: BHA- 502

Min. Hrs. - Theory: 80 Hrs.

The subject reviews the structure of clinical data and e-health records, and the required standards and regulations for documentation. Health information benchmarks include conceptual, documentation, messaging, and application standards. Students will learn about security issues for reimbursement and prospective payment systems, analytical methods for identifying trends, and presentation techniques for healthcare decision-making.

Introduction to health informatics:

Definition, Domain, Sub-domain, Tools, Focus, Application, subject area, Aspects, & Functions Major theories such as System Theory, Information Theory, Learning Theory and Change Theory Health Informatics Literacy: Information, computer and professional literacy.

Health Information System:

Definition, Purposes, Structure (operation, telecommunication, system development / project management, application support, support, network, system administration), Roles and responsibilities (CIO, Director, Manager, Supervisor, Operator, Telecommunication technician, Telecommunication Operator, System Analyst, Programmer, Consultant), Technology infrastructure (Computers, Networks, Peripherals)

Standards in Health Informatics

Standard Coordinating Group, Group formed to developed standard, Professional Organization Supporting the Development of Technical Standards, Establishing International Standards, International Standard & Committee, International Standard, Identifier Standard, General Communication Standards, Specific Communication Standards, Content and Structure Standards, Clinical Data Representation, Standard for Software Application, Telecommunication Standard.

Introduction to Health Informatics Applications

Hospital Information System, Clinical Decision Support System, eHealth, mHealth, Telemedicine

Impact of healthcare informatics on the socio-culture environment of healthcare

Information Needs and Challenges in Healthcare Environment, Advances In Healthcare Informatics In Clinical Area, Changes In Professional Practice due to advances in healthcare informatics, Changes In Management Roles due to advances in healthcare informatics

Future Direction in Health Informatics

Nine trends to predict the development of healthcare informatics, Future Study, Approach for predicting, Trends influencing healthcare informatics, Case Studies

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B.Sc. in Hospital Administration - Fifth Semester

HEALTH CARE POLICIES AND STANDARDS

Subject Code: BHA- 503

Min. Hrs. - Theory: 80 Hrs.

- Knowledge of applicable health law, regulations, accreditations standards, and certification requirements.
- Ability to evaluate compliance and develop compliant organisational policy
- Implement compliance auditing methods and techniques
- Implement ICT systems in compliance with applicable laws, regulations, standards and requirements

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B.Sc. in Hospital Administration - Fifth Semester

Health Care Financing

Subject Code: BHA- 504

Min. Hrs. - Theory: 80 Hrs.

- National health spending
- Paying for healthcare
- Basics of Health Insurance
- Different types of healthcare financing in India

Health insurance

- Terminologies
- Functions of a health financing system
- What is health insurance?
- History of health insurance
- Values in health insurance
 - o Solidarity
 - o Risk pooling / sharing
 - o Equity
- Participation / empowerment
- The health insurance framework
 - o Community
 - o Providers
 - o Organizer o Insurer
- Premium
 - o Benefit package
 - o Payments
 - o Administration
 - o Risk management
 - o Monitoring the programme
- Types of health insurance
 - o Social health insurance
 - o Private health insurance
 - o Community health insurance (CHI)
 - o Government-initiated health insurance schemes (GHI)
 - o Differences in the four categories
- Advantages of health insurance
- Problems with health insurance
 - o Adverse selection
 - o Moral hazard
 - o Cost escalation
 - o Administrative costs
 - o Fraud
- Health insurance in India
 - o Social Health insurance
 - o Voluntary (commercial) health insurance
 - o Daily hospitalization expenses – Royal Sundaram’s Hospital Cash
 - o Critical illness cover – ICICI Prudential’s Crisis cover
 - o Community health insurance (CHI)
 - o Government-initiated health insurance schemes

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B.Sc. in Hospital Administration - Sixth Semester

Hospital Accounting and Financial Accounting

Subject Code: BHA- 601

Min. Hrs. - Theory: 80 Hrs.

Hospital Accounting and Financial Accounting, Health Insurance and Billing Design: The course aims to give a fair view of exposure to the students on the basic concepts of accounts, Finance and Financial Management in Hospital and practical application in Hospital Financial Management Accounting and Health Insurance.

1. The Nature and purpose of Accounting, Accounting Concepts & Accounting records:

a. What is accounting information? Who needs it? What they need or expect?

b. What do accountants do?

c. Single Entry Book – keeping

d. Double Entry Book - keeping

e. What is an Account? Making entries.

f. Five types of Accounts (Income, Expense, Asset, Liability, Capital)

g. Book – keeping rules

h. Accounting books/ledgers (Nominal, Purchase, Sales, Journal etc)

i. Dealing with cash, imprest system

2. Preparation of various Financial Statements:

a. Trial Balance

b. Receipts and Payments

c. Income and Expenditure Account

d. Balance Sheet

3. Fixed assets and Depreciation:

a. What are fixed assets and why are they different?

b. What is depreciation and why do we need it?

c. How do we calculate depreciation? (pros and cons of different methods)

d. Accounting entries for depreciation

4. Costing and Pricing:

a. Financial accounting Vs. Cost accounting

b. Key terms: Direct/indirect, fixed/variable/semi-variable

c. Analysing results: Standard/budgeted/actual

d. Costing hospital services

e. Taken action: controllable /uncontrollable

f. Making decisions: Marginal/book/out –of pocket costs

g. Reporting costs: Cost Centres, allocation and apportionment of costs

h. Pricing methods and decisions.

5. Inventory Accounting:

a. Inventory / stocks

• Valuation (FIFO, LIFO, WAC etc)

• Optimum balance and reorder levels.

6. Analysis of Financial Statements:

a. Ratio analysis – meaning and purposes

b. Ratios applicable to Non-profit making organizations

7. Financial Planning and Control:

a. Budgets and budgetary control

8. Use of Computers in Accounting:

a. Computerized ledger systems

b. Spreadsheets & Excel based accounting

9. Accounting and Audit Procedures in Health Care Sector:

a. Accounting System in hospital

b. Purpose of an audit and auditing principles

c. What the auditor does?

d. The audit report – “True and Fair View”

e. Legal requirements: layout, audit and filing of accounts

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B.Sc. in Hospital Administration - Sixth Semester

Health Insurance and Billing Design

Subject Code: BHA- 602

Min. Hrs. - Theory: 80 Hrs.

- a. Definition and history of Health Insurance
- b. Concepts in Health Insurance
- c. Issues in Health Insurance
- d. Effective Health Insurance
- e. Good & Bad in Health Insurance
- f. Reasons for lack of coverage
- g. Denial of claims
- h. Contracts or Memorandums of Understanding
- i. Health Insurance in India
- j. Health Insurance & Third Party Administrators
- k. Insurance Regulatory Development Authority & its role
- l. Billing & Health Insurance Billing

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B.Sc. in Hospital Administration - Sixth Semester

Medical Transcription and Telemedicine

Subject Code: BHA- 603 (Elective)

Min. Hrs. - Theory: 80 Hrs

Health Information Management serves the healthcare industry and the public by managing, analyzing, and utilizing the data vital for patient care and making the data accessible to healthcare providers. Enhancing individual patient care through timely and relevant information is one of the primary goals for the Health Information Management Technology.

1. Development of Health Care Information

- Health Care Information standards, Paper based Health Records, Computer based patient records, Ethical issues in Health Information Management

2. Comparative data

- Research methods, Clinical quality management

3. Management of Health Information Services

- Principles of Management and Leadership, Work Design and Performance improved, Human Resources Management, Training and Development, Project Management, Strategic Management.

4. Medical Transcription:

- Basics of Medical Transcription
- Objectives of Medical Transcription
- Rules of Medical Transcription
- Advantages of Medical Transcription
- Division of medical words into their component parts
- Forms, Suffixes, Prefixes and Terminology
- Laboratory tests, Clinical procedures and Abbreviations

5. Telemedicine:

- Basic health care
- Classification of Telemedicine
- Technology of Telemedicine
- Objectives of Telemedicine
- Rules of Telemedicine
- Telemedicine Act
- Merits of Telemedicine
- Future Telemedicine plans
- Research

PRACTICAL

This subject provides the in depth knowledge of Medical Transcription. A medical transcriptionist transcribes physician dictated medical reports, usually onto computer files for patients' charts for a healthcare system. They need to know the proper medical terminology, correct grammar usage, knowledge of common diseases, tests, procedures and medications. Knowledge and understanding of the body systems is very helpful. The transcriptionist needs to be familiar with the proper formatting of the different medical reports.

Application of HIM in Non-traditional Settings

The subject covers reimbursement, coding, licensing, and accreditation issues in these facilities: • Management of health information in non-acute hospital settings

- Ambulatory care, mental health
- Home health, skilled nursing
- Emergency medical services and veterinary care

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Bachelor of Physiotherapy-Sixth Semester

COMMUNITY MEDICINE

Subject Code: BPT-603 (Elective)

Min. Hrs. : 80 Hrs.

COURSE OBJECTIVES: The subject serves to integrate the knowledge gained by the students in community medicine and other areas with skills to apply these in clinical situations of health and disease and its prevention. The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions and plan and set treatment goals and apply the skills gained in rehabilitating and restoring functions

COURSE LEARNING OUTCOMES: The student will be able to

1. Describe the organizational set up of the healthcare delivery system of India
2. To apply these in clinical situations of health and disease and its prevention
3. To identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions
4. To plan and set treatment goals and apply the skills gained in rehabilitating and restoring functions
5. To do evaluation of disability and planning for prevention and rehabilitation
6. To plan Community Based Rehabilitation in urban and rural setup
7. To describe the normal and abnormal physiological events during the puberty, labor, puerperium, post-natal stage and menopause and their PT management
8. To discuss the various complications during pregnancy, labour, puerperium and post-natalstage, pre and post-menopausal stage and various aspects of urogenital dysfunction and their PT management in brief
9. To perform clinical examination of pelvic floor
10. To perform clinical examination of pregnant woman
11. To describe Physiology of aging process and its influence on physical fitness
12. To perform Role of physiotherapist in geriatric rehabilitation

THEORY

TOPICS TO BE COVERED:

1. Health and Disease: Definitions, Concepts, Dimensions and Indicators of Health, Concept of well-being, Spectrum and Determinants of Health, Concept and natural history of Disease, Concepts of disease control and prevention, Modes of Intervention, Population Medicine, The role of socio-economic and cultural environment in health and disease.
2. Epidemiology, definition and scope. Principles of Epidemiology and Epidemiological methods: Components and Aims, Basic measurements, Methods, Uses of epidemiology, Infectious disease epidemiology, Dynamics and modes of disease transmission, Host defenses and Immunizing agents, Hazards of Immunization, Disease prevention and control, Disinfection. Screening for Disease: Concept of screening, Aims and Objectives, Uses and types of screening.

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3. Epidemiology of communicable disease: Respiratory infections, Intestinal infections, Arthropodborne infections, Zoonoses, Surface infections, Hospital acquired infections
Epidemiology of chronic non-communicable diseases and conditions: Cardio vascular diseases: Coronary heart disease, Hypertension, Stroke, Rheumatic heart disease, Cancer, Diabetes, Obesity, Blindness Accidents and Injuries.
4. Public health administration- an overview of the health administration set up at Central and state levels. The national health program-highlighting the role of social, economic and cultural factors in the implementation of the national programs. Health problems of vulnerable groups- pregnant and lactating women, infants and pre-school children, occupational groups.
5. Health programs in India: Vector borne disease control program, National leprosy eradication program, National tuberculosis program, National AIDS control program, National program for control of blindness, Iodine deficiency disorders (IDD) program, Universal Immunisation program, Reproductive and child health program, National cancer control program, National mental health program. National diabetes control program, National family welfare program, National sanitation and water supply program, Minimum needs program.
6. Demography and Family Planning: Demographic cycle, Fertility, Family planning- objectives of national family planning program and family planning methods, A general idea of advantage and disadvantages of the methods.
7. Preventive Medicine in Obstetrics, Paediatrics and Geriatrics: MCH problems, Antenatal, Intranatal and post natal care, Care of children, Child health problems, Rights of child and National policy for children, MCH services and indicators of MCH care, Social welfare program for women and children, Preventive medicine and geriatrics.
8. Nutrition and Health: Classification of foods, Nutritional profiles of principal foods, Nutritional problems in public health, Community nutrition program.
9. Environment and Health: Components of environment, Water and air pollution and public health: Pollution control, Disposal of waste, Medical entomology.
10. Hospital waste management: Sources of hospital waste, Health hazards, Waste management.
11. Disaster Management: Natural and man made disasters, Disaster impact and response, Relief phase, Epidemiologic surveillance and disease control, Nutrition, Rehabilitation, Disaster preparedness.
12. Occupational Health: Occupational environment, Occupational hazards, Occupational diseases, Prevention of occupational diseases. Social security and other measures for the protection from occupational hazard accidents and diseases. Details of compensation acts.
13. Mental Health: Characteristics of a mentally healthy person, Types of mental illness, Causes of mental ill health, Prevention, Mental health services, Alcohol and drug dependence. Emphasis on community aspects of mental health.
14. Health Education: Concepts, aims and objectives, Approaches to health education, Models of health education, Contents of health education, Principles of health education, Practice of health education.

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B.Sc. in Hospital Administration - Sixth Semester

Project Work

Subject Code: BHA- 604
Min. Hrs. - Theory: 160 Hrs.

1. Basic concepts of project planning
 - a) Defining objectives- Need, problem, project, feasibility, planning, formulation. - . Identifying resources
 - b) Methods/approaches, Project Appraisal- Project Format

2. Guideline for project writing
 - Title of the project
 - Name of the person
 - Duration of the project, type of project.
 - Aims and objectives - summary of the proposed project
 - Project information, location, people and personnel involved.
 - Working/methodology
 - Evaluation
 - Writing and reporting

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B.Sc. in Medical Laboratory Technology- Third Semester

CLINICAL TRAINING/ SEMINAR/ PRESENTATIONS/ CAMPS

Practical: 60 Hrs.

The students will get training any Hospital/ Well equipped Pathology or in medical checkup camps.

They will do presentations and participate in Seminars related to their subjects.

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