

Baba Farid University of Health Sciences, Faridkot (Pb)

&

Punjab Technical University, Jalandhar (Pb)

Ordinances and Syllabus

**Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)**

(Diploma Programme)

(Joint Venture Diploma Course)



The genesis of joint venture courses

The genesis of collaborative studies between Baba Farid University of Health Sciences, Faridkot and Punjab Technical University, Jalandhar goes back to a meeting held at government level wherein honourable Vice- Chancellors of both the Universities were present. Later after long discussions between the faculty members of both the Universities and higher authorities of the state government, a Memorandum Of Understanding (MoU) was signed between the two universities on 08-04-2011 at Faridkot to start joint courses. These courses were aimed to be of multidisciplinary subject nature, integrating professional engineering activities with basic medical knowledge of functioning of the human body. These courses will be aimed and so designed so as to improve the hospital management.

With the aim and objective of improving the hospital management, a one year "**Postgraduate Diploma in Hospital Engineering and Management**" with three months unpaid internship has been designed by the joint board of studies (BFUHS and PTU). The diploma course aims to impart education to prepare specialists to deal with administration and setting up and running hospitals to meet the requirements of the present times i.e efficient management and maintenance of the hospitals in the country.

Ordinances

Postgraduate Diploma in Hospital Engineering and Management

(PGDHEM)

1. Duration of the course:

Duration of the course will be one year followed by three months unpaid internship in a recognized medical teaching institution and a project work. The nature of the course will be full-time residential posting.

2. Admission criteria and qualification:

The admission to the course will be based on admission criteria and qualifications prescribed in the notification to be issued by the university making admission to the course (laid down by the joint board of studies namely BE/B Tech/B Arch/MBBS/BDS/BPT/BSc- Nursing).

NOTE: Distribution of seats

Out of **25** seats for PGDHEM, distribution of seats will be as under:

13 seats for health sciences candidates((MBBS/BDS/BPT/BSc- Nursing).

12 seats for engineering/technology candidates(BE/B Tech/B Arch).

-Selection criteria for admission will be based on the percentage of marks obtained in the qualifying degree examination.

-In the event of percentage of marks being equal. the elder candidate (date of birth) will be selected.

-In case the seats are not filled in one group (health or technical background), the candidates from the other group will be considered for admission.

3. Medium of Instructions:

The medium of instruction during the course and examinations shall be English.

4. Training Schedule for the course:

4.1 The course shall have 50:50 Engineering and Medical curriculum.

4.2 The course shall be of one year duration (followed by three months unpaid internship) with first semester of study at PTU GZS Campus Bathinda and second semester of study at GGS Medical College, Faridkot. The internship training will be at GGS Medical College, Faridkot.

4.3 The candidate will make presentation on completion of project work (internal examination worth 100 marks) before the joint board of studies of BFUHS and PTU.

- 4.4 The Engineering component of the course shall be conducted at PTU, GZS Campus, Bathinda, which will be the study centre for the course .
- 4.5 The Medical component of the course shall be conducted at GGS Medical College, Faridkot, which will be the study centre for the course.
- 4.6 The project work will be decided in the second semester and conducted at GGS Medical College, Faridkot.
- 4.7 The Postgraduate diploma offered to the candidates on the completion of the course and unpaid internship shall be signed by designated authorities of both the Universities.
- 4.8 Reservation of seats shall be as per Punjab Govt. rules.

5. Examination Schedule and Examination

- 5.1 PGDHEM course is a semester based course so the examinations shall be held on such dates as may be decided by the **Dean PTU** for the 1st semester and **Dean, BFUHS** for the 2nd semester on the recommendation of the joint board of studies. They will also function as **Exams Officers** for the course. The offices of these authorities will also function as examination offices.
- 5.2 In case a candidate fails to qualify in one or more subject/s, he/she will appear in the supplementary examination alongwith others in the next end semester examination for that subject/s.
- 5.3 The Exams Officer will direct the students/candidates to deposit their examination forms for the end semester examination alongwith the examination fee of Rs. 750.00 with late fee, if any, at the rate of Rs. 50.00 per day.
- 5.4 Office of Exams Officer will draft date sheet and circulate it to students after receipt of the examination forms and roll numbers will be issued thereafter.

It will be the responsibility of the candidate to collect information regarding examination schedule, roll number slip and result etc.
- 5.5 No candidate will be allowed to appear in the examination without the roll number slips.
- 5.6 The semester examination including evaluation and declaration of the semester examination result should be over before the end of the sixth month of the semester.
- 5.7 The Internal assessment should be submitted to the office of Exams Officer at least two weeks before the commencement of the semester examination. The internal assessment will be prepared by the concerned faculty members teaching the student of the joint course.

Internal assessment is aimed to assess values, skills and knowledge imbibed by students. It should be based on continuous evaluation of the student done through class test/mid semester tests, quizzes, seminar, home assignment and class work, laboratory work, workshop practice etc as the case may be.

Record of each student shall be maintained by the concerned teacher in each department, which should be made available for inspection by the student concerned as well as university authorities.

5.8 The candidate for the examination should secure 40% marks in internal assessment and external examination separately for each subject to pass that subject.

5.9 The candidate should have attended atleast 75% of the classes/lectures. 10% relaxation may be given by the office of Dean on grounds of candidates illness subject to submission of certificate of illness issued by a hospital.

The candidate should have remained on the rolls of the institution.

5.10 The candidate should be of good character.

5.11 No candidate shall be allowed to take the semester examination unless one has paid all the dues including university course and examination fee before the last date of submission of examination forms.

5.12 The External marks (100) for the theory paper are meant for external evaluation by the concerned university through the office of Exams Officer.

5.13 In case any student appears in the examination by default, who in fact has been detained from appearing in the examination by the institution, his/her results shall be treated as null and void.

5.14 The first semester examination for PGDHEM course shall be in the following subjects and candidate shall be required to pass in all the subjects:

Sr. No.	Subject Code	Subject	Load Allocation			Marks Distribution		Total Marks
			L	T	P	Internal	External	
1	DHEM-101	Hospital Planning	3	1	-	50	100	150
2	DHEM-102	Hospital Management	3	1	-	50	100	150
3	DHEM-103	Hospital Facilities Management	3	1	-	50	100	150
4	DHEM-104	Hospital Maintenance	3	1	-	50	100	150
5	DHEM-105	Hospital Management Control System	3	1	-	50	100	150
Total			15	5	-	250	500	750

- i) Each theory paper shall be of three hours duration.
- ii) A candidate who fails in one or more subjects in the first semester examination will be promoted to second semester but will have to clear/pass the subject/s in which he/she failed the next supplementary end semester examination.
- iii) A candidate who will absent himself/herself from the examination will be deemed to have failed in that subject in the examination.
- iv) A candidates securing 75% or above marks in aggregate of all subjects of the semester shall be declared to have passed with Distinction in that semester provided he/she has passed the examination in the first attempt.
- v) At the end of semester examination, the candidate is to be supplied with a details marks certificate (DMC) indicating the marks obtained in each course or subject passed.

5.15 The second semester examination for PGDHEM course shall be in the following subjects and the candidate shall be required to pass in all the subjects:

Sr. No.	Subject Code	Subject	Load Allocation			Marks Distribution		Total Marks
			L	T	P	Internal	External	
1	DHEM-201	Management of Healthcare and Hospital Services	3	1	-	50	100	150
2	DHEM-202	Hospital Administration and Medical Terminology	3	1	-	50	100	150
3	DHEM-203	Material Management, Inventory Control, Managerial Accounting & Financial Management	3	1	-	50	100	150
4	DHEM-204	Computer Fundamental & Software related to Hospitals	3	1	-	50	100	150
5	DHEM-205	Legal Aspects of Hospital Management	3	1	-	50	100	150
Total			15	5	-	250	500	750

- i) Each theory paper shall be of three hours duration.
- ii) A candidate who fails in one or more subjects in the first semester examination will be promoted to second semester but will have to clear/pass the subject/s in which he/she failed the next supplementary end semester examination.
- iii) A candidate who will absent himself/herself from the examination will be deemed to have failed in that subject in the examination.
- iv) A candidates securing 75% or above marks in aggregate of all subjects of the semester shall be declared to have passed with Distinction in that semester provided he/she has passed the examination in the first attempt.
- v) At the end of semester examination, the candidate is to be supplied with a details marks certificate (DMC) indicating the marks obtained in each course or subject passed.

- 5.16 Project work: On completion and passing the two semester examinations, a candidate will undertake the project work assigned to him/her by the joint board of studies.

Project Work	Content of Project Work	Presentation with Viva	Total Marks
	50	50	100

Note: The project work will be evaluated internally by the joint board of studies and a candidate is required to obtain 40% marks to pass it.

- 5.17 Internship: On completion and passing the two semester examinations, a candidate will undergo a three months unpaid internship training.
75% attendance is compulsory during internship.

6. Grace Marks:

Grace marks up to a maximum of five marks may be awarded at the discretion of the university to a student who has failed only in one subject but has passed in all other subjects in one semester.

7. Paper setting:

The theory papers for the subjects of study for the course will be got set by the Exams Officer.

8. Evaluation of Answer books:

The theory answer books will be got evaluated by putting the fictitious roll numbers.

Rechecking/ Re-totaling of Answer books:

There will be no rechecking of the answer sheets. However, re-totaling of the marks on payment of requisite fee of Rs 1500=00 is allowed if application alongwith the requisite fee is moved within ten days of declaration/publication of the result of the candidate.

The practice of re-totaling will involve to find out:

- a) Whether all answers and/or part thereof are evaluated ?
In case any answer or part thereof is found to be left unevaluated, the office shall get it evaluated within the stipulated period.
- b) Whether the marks awarded on each answer are correctly posted on the cover page of the answer book ?
In case of any discrepancy, correction will be effected.
- c) Whether the totaling of the marks posted on the cover page is correct ?
In case of any discrepancy, correction will be effected.

This exercise will be completed within one week of receipt of the application from the candidate in his/her own handwriting along with the requisite fee for the same.

9. Declaration of Result:

The office of Exams Officer shall declare and publish the result after examination. The candidate shall be issued a detail marks certificate.

10. Duration for the completion and the PGDHEM course requirements (maximum period)

A total of 3 years from date of admission shall be given to a student of PGDHEM course to pass all subjects and to fulfill all other requirements for the completion of diploma course failing which the candidature of the student shall stand cancelled and no diploma shall be awarded.

11. Powers of the Vice-Chancellor :

Notwithstanding anything contained in these regulations, the respective Vice-Chancellor shall be competent to allow any relaxation in consultation with board of studies. The Vice-Chancellor's decision shall be final.

12. Award of Diploma:

On successfully passing the semester examinations, project work and satisfactory completion of internship, the candidate shall be awarded the diploma **Postgraduate Diploma in Hospital Engineering and Management (PGDHEM)**.

**Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)**

The uniform format of the theory question paper will be the same for all the subjects of both the semesters of the diploma course

- NOTE:**
- The theory question paper shall be covering the entire syllabus.
 - The time duration of the paper will be **3 Hours**.
 - It will carry a total **100 marks**.

 - There shall be **12** questions covering the entire syllabus uniformly out of which a candidate will attempt only **10** questions.
 - Each question will carry **10** marks

Syllabus**First Semester at PTU GZS Campus, Bathinda****Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)****DHEM - 101****Hospital Planning**

1. Types of Hospital Organizations, Statutory Requirements for planning.
2. Steps in Hospital Planning- Need Assessment, Appointment of Architect, Size of the hospital, Design of the Hospital, Landscaping in Hospital, Preparation of master plan.
3. Layout, Zoning and phasing of activities for various departments in the hospital. Circulation and movements in the hospital, Patient staff and visitors, supply of CSSD, Food and Laundry.
4. Planning of various departments: OPD/ Accidents/Emergency. Indoor accommodation, ward design, Intensive Care Unit, Operation Theatre.
5. Planning for engineering services and impact of regulation on services design- Water Supply, Electricity, Drainage, Sewage disposal, Gas, Acoustical.
6. New Trends in Hospital Design, Intelligent Building Management System, Impact of new technology, Management information system.

Reference Books:

1. Hospital and Nursing Homes: Planning, Organisation and Management- by Syed Amin Tabish
2. Hospital Administration- C.M Francis and M. Desouza
3. Hospital Planning, Design and Management- by Kunders and Gopinath
4. Hospital Designing- by Sangeet Sharma and Purnima Sharma.

Syllabus

First Semester at PTU GZS Campus, Bathinda

**Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)**

DHEM - 102

Hospital Management

1. Introduction to Management, Nature and scope of Management, Branches of Management, Functions of Human Resource, Management: Recruitment, selection, Transfer, Promotion, Demotion, Separation, Retirement.
2. Employee Training, Management Development, Performance Appraisal, Environmental Analysis- SWOT-PEST, Delegation of Authority, Organizational Conflicts, Work Group, Team Building, Job frustration.
3. Functions of Management: Planning, Organizing, Staffing, Directing, Controlling. Motivation, Leadership, Decision-Making, Communication, Application of function of Management to Hospitals.
4. Organisational Structure Personality- Learning-Attitudes Perception- their relevance to hospital management., job stress and Managing Stress, Organizational Change, need and nature, causes of change, resistance of change , management of change in hospitals.

Syllabus**First Semester at PTU GZS Campus, Bathinda****Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)****DHEM - 103****Hospital Facilities Management**

1. Fire Safety: Need to understand the causes of fire in a hospital and its hazards, precautionary and safety measures and its management, principles of building design to withstand fire and various means of fire safety, fire rating of various building materials.
2. Waste Management: Various types of hospital waste such as biomedical organic etc., and their health hazards. Collection, transportation, and efficient disposal of hospital wastes, recycling, reuse etc.
3. Disaster Mitigation and Management: General guidelines and principles of building design for the following: Earthquake, Floods, Fire hazards, Cyclones etc. Post Disaster problems, issues and management. Preparedness to meet disasters, effective rescue operation, preparedness for medical supply, emergency care (First aid, home remedies), Disposal of dead bodies (human and cattle), care for old and orphans.

Reference books:

1. Hospital Administration and Planning- by A.G. Chandorkar
2. Healthcare System and Management- by S.L. Goel
3. Principal of Hospital Administration and Planning- by B.M. Sakharkar
4. Management of Hospital - by S.L. Goel and Kumar.

Syllabus

First Semester at PTU GZS Campus, Bathinda

**Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)**

DHEM – 104

Hospital Maintenance

1. Principles of Maintenance: Importance of Maintenance, Deterioration and durability, factors affecting decision to carryout maintenance, agencies causing deterioration, effect of deterioration agencies on materials.
2. Design consideration in Maintenance: Factors to reduce maintenance at design stage, Consideration of maintenance aspects in preparing tender document and specifications, Sources of error in design which enhances maintenance, importance of working drawing and schedules, Provision of access for maintenance and its importance at design stage.
3. Economic consideration in maintenance : Physical life, Functional life of different types of buildings, Discounting technique for assessment of economic life.
4. Maintenance Management: Definition, Organization structure, work force for Maintenance, Communication needs, Building inspection, Maintenance budget and estimates, property inspection and reports , Specification for maintenance Manual and their importance.
5. Materials for maintenance: Compatibility of repair materials, Durability and maintenance. Types of materials, their specification and application, Criteria for selection of material, Use of Commercial available materials in maintenance.
6. Investigation and diagnosis for repair of structures: Basic Approach to investigation,

Physical inspection, Material Tests, Non Destructive testing for diagnosis, Estimation of actual, loads and environmental effects. study of design and construction practices used in original construction, Retrospective analysis, confirmation and repair steps.

7. Building Defects and Remedial Measures Measures : Nature, types of problems, their causes, remedial measures and special treatment for various building elements.

Reference Books

1. Chudley, Building Finishes, Fittings and Domestic Scientific and Technical.
2. Fred Hall, Building Services & Equipment, Longman Scientific and technical.
3. Norbert Lechner, Heating cooling, Lighting, John Wiley and Sons.
4. Panchadari, Maintenance of Buildings, New age International.

Syllabus

First Semester at PTU GZS Campus, Bathinda

**Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)**

DHEM - 105

Hospital Management Control System

1. Impact of information Technology on Society and services including healthcare, Use of I T in healthcare, The future of healthcare technology.
2. Information System cycle. Overview of hardware and software systems, cyber laws and computer crimes, Role of Healthcare professionals.
3. Electronic communications, Business use of the internet, interactive marketing, Electronic Health record, Advances in public health, Functions of the health record, changing function of the patient's health record, challenges of E-health medical records.
4. Concept of networking Hospital information System, Clinical information system, Administrative Information System, Support service Technical information System, Health and medical informatics, Telemedicine, Health insurance portability and Accountability Act (HIPPA)

Reference Books

1. Informatics for Healthcare professionals, by Kathleen M.
2. Managing a Modern Hospital, by A.V. Srinivasan
3. Management information systems in Hospital, By A.K. Saini
4. Dynamic Hospital information, by Giled J. Kuperman
5. Health Management information System, by Jack Smith

Syllabus

**Second Semester at GGS Medical College, Faridkot
Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)**

DHEM - 201

Management of Healthcare and Hospital Services

1. Health Administration in India.
2. Health Care Delivery System.
3. National Health Policy.
4. National Health Programmes.
 - Tuberculosis's control Programme, DOTS
 - Programme for control of Blindness
 - Family welfare programme
 - AIDS control programme, role & functions of National AIDS Control Organisation (NACO).
5. Review of reports on Healthcare
6. Epidemiological Triad, Levels of Disease Prevention
7. Disaster Management/Disaster Plan -Fire fighting, Dealing with crisis situations, Natural disasters -floods, earthquakes etc., Mob violence against medical establishments, Bomb threat, Terrorist strike, Political agitation, Mass casualties
8. Engineering Services.
 - Maintenance of Building, Campus & Utilities
 - Biomedical services
 - Fire safety.
9. Quality Management in health care
 - Service and Process quality
 - Cost of quality, Quality control
 - Statistical methods in hospitals for control of service quality
 - Standard Operating Procedures (SOPs).
 - ISO, ISO standards and their implementation
 - Accreditation of hospitals -ISO, NABH, JCI

10. Insurance companies and TPAs
 - Insurance policies and cover
 - Personal accident insurance benefit
 - Claims procedures
 - Administration of patient related schemes
 - Medical insurance -cashless benefit, reimbursement
 - CGHS, ECHS, CSMA, ESIC

Books Recommended

1. Park's Text Book of Preventive & Social Medicine -By K. Park, Banarasidas Bhanot, Jabalpur.
2. Essential of Hospital Support Services & Physical Infrastructure -By Madhuri Sharma -Jaypee Brothers, New Delhi.
3. Hospital Services Management -By S.K. Parthsarathi -KJ. Hospital, Madras.
4. Medical Records Organisation & Management -By G.P. MogliJaypee Brothers, New Delhi.
5. Hotel, Hostel & House Keeping -Joan C. Branson, Margaret & Lennox -Book Power.
6. Total Quality Management -By V.V. Gopal-ICFAI University Press.

Syllabus**First Semester at GGS Medical College, Faridkot
Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)****DHEM - 202****Hospital Administration and Medical Terminology****Section A: Hospital Administration**

1. History of hospital as an organization and its structure – various departments, wards and other areas
2. Routine Admission / Discharge Procedures/Discharge Summary
3. Hospital Utilization Statistics–ALOS, Bed Occupancy Rate, Turn Over Interval, OT Utilization, Departments/modality utilization
4. Daily Reports / Returns - Hospital Census, Matron's Report, Medical Officer's Report, Casualty Report, Medico-Legal Cases, Report from ICU / ICCU, Security Report, Maintenance Department Report, OT List
5. Biostatistics - Vital and Health statistics, Frequency distribution, Measurements of mean, median and mode, Measurements of dispersion mean and standard deviation, Testing of hypothesis, Test of significance -Normal test (t) and Chi-square test, Incidence and prevalence rates
6. Patient's Complaints.
7. Medical Certificates.
8. Hospital Committees - Role, Composition, Frequency of Meetings, Minutes of the Meetings, Follow up Actions.
9. Patient Relations Management - Interviews, Questionnaires, Observations, Exit Interviews, Reporting and Compliance
10. Duties & Responsibilities of the Hospital Administrator/CEO - In Profit Making Hospitals, In Non-Profit Making Hospitals
11. Marketing of Hospital -Guest Lectures, Seminars, Workshops, Continuous Medical Education, Organization of Camps, Public Participation, International Marketing and medical tourism
12. Hospital Security - Staff, Patients, New born babies, Stores

13. Hospital Waste Management.
14. Methods of Infection Control.

Section B: Medical Terminology & Procedures

15. Fundamentals of Medical Terminology - Word Roots, Prefix, Suffix, Abbreviations & Symbols
16. Introduction to Anatomy & Physiology Organs & Systems - Gastro Intestinal, Respiratory, Circulatory, Renal, Reproductive, Nervous, Endocrine, Musculoskeletal
17. Common Diseases & Procedures -Gastro Intestinal - Cholecystitis and Cholelithiasis, Appendicitis, Intestinal Obstruction, Hernia -Peritonitis, Gastroscopy, Colonoscopy, Laparoscopy, Laparotomy
18. Common Diseases & Procedures -Respiratory - Tuberculosis, Bronchial Asthma, Respiratory Failure, Pulmonary Embolism, Pneumonia, Bronchoscopy, Pulmonary Function Tests, Cardio-Pulmonary Resuscitation (CPR)
19. Circulatory - Hypertension, Coronary Artery Disease, Cardiac Arrest, Shock, Deep Vein Thrombosis (DVT), ECG, 2D Echo Cardiogram, Coronary Angiography and Angioplasty, Cardiac Catheterization, Stress Test (TMT), Pacemaker
20. Renal - Urinary Tract Infection, Renal Failure, Renal/Bladder Stones, Intravenous Pyelography, Cystoscopy, Urinalysis, Hemodialysis, Peritoneal Dialysis
21. Reproductive - Female (Menstrual Disorders, Fibroids, Malignancy -Breast cancer and self-examination, Infertility and IVF, Mammography, Ultra Sound, Laparoscopy, Tubectomy, D&C), Male (Prostate Enlargement, Hydrocele, Transurethral Resection of Prostate (TURP))
22. Nervous - Stroke (Cerebrovascular accident -CVA), Brain Tumor, Brain Injuries, Spinal Cord Injuries, Lumbar Puncture, Myelography, CT Scan, MRI, EEG, EMG
23. Endocrine - Thyroid disorders, Diabetes mellitus
24. Musculoskeletal - Osteoporosis, Fractures and treatments, Implants
25. Oncology - Investigations, FNAC, Histopathology and frozen section, Application of nuclear medicine in oncology

Books Recommended:

1. Sana's Guidelines for Hospital Infection Control-By Mohd. S. KhanJaypee Brothers, New Delhi.
2. Hospital Waste Management & it's Monitoring -By Madhuri Sharma –Jaypee Brothers, New Delhi.
3. Medical Stores Management -By Shakti Gupta & Sunil Kant -Jaypee Brothers, New Delhi.
4. Medical Records, Organisation & Management-By G.P. MogliJaypee Brothers, New Delhi.
5. Guidelines on Effective Hospital Administration-Dr. P.V.Bokil
6. Emergency Medical Services & Disaster Management -By D.K. Dave & Shakti Gupta –Jaypee Brothers, New Delhi.
7. Hospital Waste Management -By A.G. Chandorkar -Paras Medical Publisher.
8. Hospital Infection Control-By S.A. Tabish -Academa, New Delhi.
9. Principles of Anatomy & Physiology -By Gerard I. Tortora
10. Anatomy & Physiology in Health & Illness -By Anne WaughChurchil Livingstone.
11. Anatomy & Physiology for Nurses -By Evelyn Pearce -Indian Edition -Jaypee Brothers, New Delhi.
12. Dorland's Pocket Medical Dictionary.
13. Taber's Cyclopedic Medical Dictionary -Fadavis Philadelphin
14. Medical Manual of Anatomy -By.Sampath Madhyastha -CBS Publication.

Syllabus**First Semester at GGS Medical College, Faridkot
Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)****DHEM - 203****Material Management, Inventory Control, Managerial Accounting and Financial Management****Section A: Materials Management and Inventory Control**

1. Principles of Materials Management – Definition, Scope & Functions, Objectives
2. Materials Planning and Classification of Materials - Consumable / Non consumable, working out quantities required, Forecasting / Budgeting, Availability of materials, Critical items /
Stock level, Procurement methods
3. Purchase Management - Objectives, Purchase system (Centralised, Decentralized, Local purchase), Legal aspects of purchasing, Out Sourcing of Services
4. Purchase Procedures - Selection of Suppliers, Tendering procedures, Analysing bids, Price negotiations, Issue of purchase orders, Rate Contracts, Follow up action
5. Receipt of Materials -Inspection of materials, Preparation of defect/Discrepancy Report, Disposal of rejected items, Stocking of accepted items, Accounting of materials.
6. Store Management -Organisation & layout, Functions of Store Manager, Materials handling, Flow of goods/FIFO, Computerisation of inventory transactions, Security of stores, Disposal of scrap/unserviceable materials, Sub-stores in various departments, Physical stock taking.
7. Inventory Control - Aims & objectives, Scope of Inventory Control, Lead-time, Buffer stock, Reorder level, Two Bin System, EOQ.
8. Tools & Techniques of Inventory Control - ABC, VED
9. Medical Stores - Functions, Storage condition/Monitoring, Expiry Dates & Action, Cold Chain, Role of drug Review Committee (Hospital formulary, Obsolescence).

Section B: Managerial Accounting and Financial Management

10. Introduction - Origin of Accounting & its importance, Different disciplines in Accounting, Difference between Accounts, Costing, Finance, Taxation, Audit, etc
11. Double Entry System of Accounts - Transactions -Debit & Credit, Classification of Accounts, Rules of Accounts
12. Journal - Types of Journals/Subsidiary Books
13. Ledger
14. Depreciation
15. Preparation of Final Accounts - Profit making Hospitals, Non-Profit making Hospitals
16. Working Capital Management
17. Budgetary Control - Difference between Budget, Estimate & Projection, Types of Budget -with special reference to Functional Budget, How to monitor a Budget
18. Elements of Cost of a Product/Service - Direct & Indirect Cost, Allocation of Overhead Cost, Analysis of Marginal Costing & Unit Costing

Books Recommended:

1. Basic Accounts & Finance for Non-Accounts -By Prof. D.K.Chatterjee -Himalaya Publishing House.
2. Handbook on Accounting for Hospital Management-By Prof. D. K. Chatterjee - Himalaya Publishing House.
3. Financial Management -By Prasanna Chandra -Tata McGraw Hill.
4. Modern Accounting -By Hanif & Mukhmjee.
5. Cost Accounting Methods & Problems -By B. K. Bhor.
6. Principles & Practices of Cost Accounting -By N. K. Prasad.
7. Handbook of Materials Management -By P. Gopalkrishnan -Prentice _ Hall India.
8. Purchasing & Materials Management -By P. Gopalkrishnan -Tata McGraw Hill.
9. Materials & Logistic Management -By Prof. L.c. Jhamb -Everest Publications.
10. Introduction to Materials Management -By Tony Arnold -Peerson.
11. Stores, Management & Logistics -By -Po Gopalkrishnan Sultanchand & Co., New Delhi.

Syllabus
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DHEM - 204

Computer Fundamentals & Software Related to Hospitals

01. Computer Basics

Definition of a Computer, Block Diagram of elements of digital computer their functions, computer hardware & software, computer generations, Types of computer, Memory, CPU, I-O devices, Secondary storages, Magnetics Tape, Disk, CD-ROM, Other recent development- Scanners, Digitizer, Plotters, Printers, Hardware and Software, Micro, Mini, Main-frame and super computer, Cyber Crimes-Hackers and Crackers.

02. Operating System: Windows

03. Office Automation Software (MS-Office 2007)

Word processing software MS-Word

Spreadsheet Software MS-Excel-Graphics and Charts, pivot table

Conditions, formatting, formulae

Presentation Software

MS-Powerpoint

Other Applications

04. Various types of viruses, antivirus softwares

05. Networking-LAN, MAN, WAN, Hardware of networking Modem, Hub, Switches, Cables.

06. Introduction to Internet Technology:
Explanation to Internet and its applications like E-mailing, Chatting
Browsing Data Uploading/Downloading etc.
07. Introduction to the software's related to the Hospital Management:
Hospital Management System, Payroll System, Accounting System,
Inventory Control System & other Computer Applications in Hospital.
08. Telemedicine-Introduction and Applications
09. Programming Concepts
Introduction to programming. Arithmetic and Logical Operators. Flowchart &
Algorithms, Types of Software:-System software and Application software, Firmware
10. Database Management System
Introduction to DBMS and RDBMS.
Concepts of Database, Tables, Rows and Columns. Concepts of Relations ; One to
One, One to Many, Many to Many, Normalization of Database.
Keys : Primary Key, Foreign Key, Composite Primary Key.
Creation of Database in MS Access and setting Relationships among tables.
Referential Integrity Concept, Update and Delete Cascading. SQL Select Query with
'Where' Clause.

Syllabus**First Semester at GGS Medical College, Faridkot****Post Graduate Diploma in Hospital Engineering and Management
(PGDHEM)****DHEM - 205****Legal Aspects of Hospital Management****SECTION – A**

Introduction to Legal aspects in health care, health as a fundamental right; Hospital services and law: Medical ethics including Hippocratic Oath, declaration of Geneva and international code of medical ethics and violation of these ethics; informed consent; rights and responsibilities of patients; confidentiality issues with respect to contractual obligations towards the patients, electronic medical records and Health. Liability and accountability towards patients and third parties and employees (vicarious liability)

SECTION – B

Medical negligence – definition, The Bolam test, Civil and criminal negligence, relevant sections of Indian Penal code, defense against medical negligence; The Consumer Protection Act – it's scope, various levels of consumer courts (District forum, State Commission, National Consumer Dispute Redressal Forum) and procedure followed in each; Professional Indemnity; Legal Implications in Medical Emergencies; Euthanasia- its types and the international & national Perspective ; the concept of Living Will.

SECTION – C

A brief account of various laws related to healthcare - Human Organs Transplantation Act, Inquest and its proceedings, The Drugs and Magic Remedies Act, Registration of Birth and Death Act, PNDT act (1994) and MTP Act (1971). Regulatory framework of hospitals – The Indian Medical Council act; Regulatory requirements to set up a Blood Bank; Legal aspects of Assisted Reproductive techniques

SECTION – D

Preventive Steps for Doctors/Hospitals to Avoid Litigation - Consent Form - Life support - High Risk Consent - Post Mortem

Suggested Readings

1. Vijay Mallik: Laws Relating to Drugs and Cosmetics, Eastern Book Co.
2. George D Pozgar: Legal Aspects of Health Care Administration, Aspen publications.
3. Michelle A. Green, Mary Jo Bowie: Essentials of Health Information Management - Principles and Practices, Thomson Delmar Learning.
4. Journal of Legal Medicine, Taylor & Francis Group.