SRI BALAJI VIDYAPEETH

(Deemed to be University Declared u/s 3 of UGC act 1956)
Accredited by NAAC with 'A' Grade
Pondicherry – 607 402.
www.sbvu.ac.in

MAHATMA GANDHI MEDICAL COLLEGE & RESEARCH INSTITUTE, PONDICHERRY

FACULTY OF ALLIED HEALTH SCIENCES

POSTGRADUATE DIPLOMA IN GOOD CLINICAL LABORATORY PRACTICES

2019 -20 ONWARDS

Department of Biochemistry

Mahatma Gandhi Medical College and Research

CHOICE BASED CREDIT SYSTEM (CBCS)

(As approved in the Academic Council at the meeting held on 22-05-2019)

POLICY ON COURSES OFFERED UNDER FACULTY OF ALLIED HEALTH SCIENCES

PREAMBLE

Sri Balaji Vidyapeeth, Deemed to be University, established under Section 3 of UGC Act, 1956, Accredited by NAAC with A Grade offers various courses under the Faculty of Medicine, Faculty of Dentistry, Faculty of Nursing Sciences and Faculty of Allied Health Sciences.

"Allied Health Professions are a distinct group of health professionals who apply their expertise to prevent disease transmission, diagnose, treat and rehabilitate people of all ages and all specialties. Together with a range of technical and support staff they may deliver direct patient care, rehabilitation, treatment, diagnostics and health improvement interventions to restore and maintain optimal physical, sensory, psychological, cognitive and social functions." - Organization of International Chief Health Professions Officers (ICHPO).

In March 2011, the Ministry of Health and Family Welfare nominated the Public Health Foundation of India (PHFI) as its technical partner and constituted the National Initiative for Allied Health Sciences (NIAHS) secretariat with a mandate to develop a framework to improve allied health training, education and regulation in the country. (Yet to be notified by Government of India).

Sri Balaji Vidyapeeth has introduced several innovative need based courses under the Faculty of Allied Health Sciences at Undergraduate and Postgraduate levels keeping in mind the initiative of Ministry of Health & Family Welfare, Government of India. In an era marked by expanding global job opportunities, these courses are bound to create an awareness among the students to suit themselves in the Health Care Team. Curricula have been designed in an objective manner and are aimed at cognitive, affective and psychomotor domains of learning. Furthermore all courses are designed in Choice Based Credit System (CBCS) made to suit the convenience of the students.

The Undergraduate courses mainly concentrate in creating professionals who form the part of the Health Care Team. The role of these professional is to ably assist the doctor in treatment as well as prognosis and in many a times form the core professional of the team. The proficiency and competence of the Undergraduates is fortified by the promulgation of a unique internship cum research programme.

The Postgraduate courses mainly aim at shaping a graduate into a full professional. Also these postgraduate courses help the graduates as well as the postgraduates to acquire specific skills on various adjunct therapies and techniques.

POLICY ON ELIGIBILITY, ADMISSION, & COURSE DURATION OF PG Diploma COURSES

At Sri Balaji Vidyapeeth, we empower the departments of all the constituent colleges to contribute to the development of innovative, need, value based and job oriented courses taking into considerations the interests of the stake holders.

The Diploma courses (PGDIPLOMA) are presently being offered under the Choice Based Credit System (CBCS) mode as per the Guidelines of UGC. The duration of the course will be one year. 80 percent of attendance is mandatory for appearing at the University Examinations. The students should also complete a short duration project (in their areas of interest) and also maintain and submit a log book. The maximum time limit for completion of the course will be two years. However, the Dean / Principal, AHS has the discretionary powers to extend the course duration on valid grounds (Health, Maternity, Natural Disaster, etc.).

Eligibility for Admission

A candidate seeking admission in the PGDGCLP Programme shall be completing the **MD Biochemistry, MD Pathology, MD Microbiology, MSc Medical Microbiology, MSc Medical Biochemistry, BSc (MLT), PG DMLT, M.Sc MLT degree from any University/ Institute recognized by UGC with 50%mark**

PAYMENT OF TUITION AND OTHER FEES

Every student shall pay tuition fee and other fee, as prescribed by the University, within the due date notified. The fees are subject to revision as per rules of the University. All fees, once paid to the University, will not be refunded or adjusted for any other purpose under any circumstance.

OUTLINE OF THE CHOICE BASED CREDIT SYSTEM (CBCS) FOR POST GRADUATE DIPLOMA PROGRAMME

Credit System Credit System (CBCS): The CBCS provides choice for students to select from the prescribed courses (Hard core courses (core course) and Soft core courses (elective courses).This is to enhance the quality and mobility of the students within and between the Universities in the country and abroad.

Credit hours

16 Theory classes = 1 credit

32 Practical/Tutorial/Clinical training/Research project = 1 credit

Subjects	Credits
Each core subjects	4 Credits
Skill Enhancement course (SEC)	3 Credits
Generic Elective course (GEC)	3 Credits
Discipline Specific Electives (DSE)	3 Credits

Courses: The courses offered under this Programme of Study are represented as Hard Core courses (core course) and Soft Core courses (elective course).

a) Hard core course (core course): A Hard core course may be a Theory, Practical, clinical rotation/field work or Research Project Work which are compulsory component studied by candidate to complete the requirement of their programme**.**

b) Soft Core or Elective Course: Soft core Course may be Theory, Practical, field work, clinical rotation or Research Project Work which can be chosen from the list of courses offered by the department/CBCS under SBV/national centre for a particular programme of a study. Soft Course may be supportive to their discipline of study or providing an expanded scope or exposure to multiple disciplines of study to nurture the candidate's proficiency/skill.

i) Discipline Specific Elective (DSE) Course: An elective course which is supportive or related to the discipline/subject (i.e. supportive to hard core course) is called a Discipline Specific Elective (DSE) Course.

ii) Generic Elective (GE) Course: An elective course which is unrelated to the discipline/subject (i.e. unrelated to hard core course) to expand their knowledge chosen by a candidate is called a Generic Elective.

iii) Skill Enhancement Courses (SEC): This course chosen by candidate which provides additional value-based and skill-based knowledge to increase their employability.

CRITERIA FOR UNIVERSITY EXAMINATIONS ON COURSES OFFERED UNDER FACULTY OF ALLIED HEALTH SCIENCES

SCHEME OF EXAMINATION

1) **Attendance Requirements**: 80% hours of learning in each Core Subjects / Electives / Practical's /clinical rotation/Postings for appearing for the university exams.
2) **Minimum marks required to be eligible for University Examination**: 50% marks in the internal assessment (Theory / Practical) are required for the candidate to be eligible to appear in the University Examinations.
3) **Passing Minimum**: 50% aggregate both in theory and practical's including internal assessment marks is required for a candidate to pass in the University Examinations.
4) **Submission of Project and Record Note Books for practical examinations**

   Candidates appearing for practical examinations should submit bonafide Record Note Books and Project prescribed for practical examinations, otherwise the candidates shall not be permitted to appear for the practical examinations.

GRADING

Marks obtained by candidate	Equivalent grade letter	Grade descriptor	Grade point
85 % & above	O	Outstanding	10
75-84	A+	Excellent	9
65-74	A	Very good	8
60-64	B+	Good	7
55-59	B	Above average	6
50-54	C	Average pass	5
49 & below	F	Reappear	0
	AB	Absent	0

A student obtaining **Grade F** shall be considered failed and will be required to reappear in the examination.

Conversion formula for Percentage to CGPA

Percentage divided by 9.5 = CGPA

Award of Class

Class division will be based on CGPA grade
≥ 7.8 grade point = Distinction Division
≥ 6.8 and < 7.7 grade point = First class Division
≥ 6.3 and < 6.7 grade point = Second class Division
≥ 5.2 and < 6.2 grade point = Third class Division
< 5.2 and below – Fail

Cumulative Grade Point Average (CGPA): It is a measure of overall cumulative performance of a student over all exams. The CGPA is the ratio of total credit points secured by a student in various courses in all exams and the sum of the total credits of all courses in all the University exams. It is expressed up to two decimal places.

Grade Point: It is a numerical weight allotted to each letter grade on a 9.5 point scale.

Transcript: Based on the credits earned, a transcript shall be issued to all the registered students after the completion of the program indicating the hours of study and structure of the curriculum delivery as prescribed in his/her curriculum and completed by the student. The transcript will display the course details, including course code, title, and number of credits, hours and type of contact hours in a non-semester.

INTERNAL ASSESSMENT

- Continuous Internal Assessment (CIA) for all AHS programs with a minimum of 4 Assessments per year.
- Internal Assessment will be done in each subject according to the scheme of examinations. The IA marks will be on the basis of performance in the assignment, class tests and practical test in the clinical areas.

Evaluation of Clinical Rotation

Lab, Clinical rotation/postings - To conduct practical's or viva based on the Heads of the concerned department's decision and the total 100 marks to be sent to COE through proper channel to find a place in the transcript.

Question Paper Pattern

The following question paper patterns shall be followed for CBCS pattern syllabi for the candidates admitted from the academic year 2019-20 onwards.

CORE SUBJECTS

For **POST GRADUATE DIPLOMA NON-SEMESTER PROGRAMME -** Each Core Subjects University Exam carries -100 marks of 80(Theory) + 20 (IA marks) which consists of

Theory – 80 marks			
I	Short Essay questions	10 (*2 choice)	8 x 10=80

The University duration of 80 marks – 3 Hours

ELECTIVE SUBJECTS

For all UG/PG/DIPLOMA NON SEMESTER **COMPULSORY, GENERIC & DISCIPLINE** Elective University Exam papers carries- 50 marks of 40 (Theory)+10 (IA marks) which consists of

Theory – 40 marks			
I	Short Essay questions	5 (*1 choice)	4 x 10=40

*** Number of choices given**

For **SKILL BASED ELECTIVES** from 2019-20 batch onwards all UG/PG/DIPLOMA AHS courses will have 40 marks as university Practical cum Viva examination & 10 marks as Internal Assessment = 50 marks.

50 marks of the **COMPULSORY, GENERIC, DISCIPLINE & SKILL BASED ELECITIVES** which will be converted to 100 marks in the transcript.

CONDONATION FOR SHORTAGE OF ATTENDANCE

Condonation of shortage of attendance in aggregate up to 10% in each Year may be granted by the college Academic Committee and as per regulations of university.

RESEARCH PROJECT: Candidates should carry out individual projects only. Research Project shall be allotted at the beginning of the first year. Faculty members of the respective colleges must serve as guides and Co- guides from the other institutions may be allowed. Research Project work in THREE copies have to be submitted to university 30 days before the actual schedule of the exam. Research Project report evaluation will be done and Viva-voce will be conducted by both the external and internal examiners during university practical examination for 50 marks

Components	**Marks (50)**
Research Project	30
Viva	20
Total	50

Examiners: 1 Internal, 1external

External examiner should be a regular teaching faculty of any medical college with either a MD (Biochemistry, Pathology, Microbiology or Laboratory Medicine) or MSc. PhD and should be Associate Professor and above. Theory paper will be evaluated by both external and internal examiners.

Question paper setters: should be a regular teaching faculty of any recognized medical college with either a MD degree or M.Sc., PhD.,(Biochemistry, Pathology, Microbiology or Laboratory Medicine).

Practical Duration: one day

BOARD OF STUDIES:

MEMBERS:

External members:

1. Dr. Nandeesha T, Additional Professor, Department of Biochemistry, JIPMER, Pondicherry
2. Dr. Vinayagamoorthy, Associate Professor, Department of Biochemistry, IGMCRI, Pondicherry.

Internal members:

1. Dr. S. Sumathi, Professor& Head, Dept. of Biochemistry, MGMC&RI
2. Dr. Kulkarni Sweta, Associate Professor, Dept. of Biochemistry, MGMC&RI
3. Dr. R. Reeta, Associate Professor, Dept. of Biochemistry, MGMC&RI
4. Mr. K. Ramachandran, Tutor, Dept. of Biochemistry, MGMC&R

Course structure and Examination scheme

Post Graduate Diploma in Good Clinical Laboratory Practice (GCLP)

S. No	Course code	Category	Course Title	Hours / Non-Sem	Credit	University Marks	IA marks	Total marks
1	Hard core	Core theory- 1	Good Clinical Laboratory Practice	64	4	**80**	**20**	**100**
2		Core theory- 2	Ethics & Bio-safety in laboratory services	64	4	**80**	**20**	**100**
3		Core Lab-1	Good Clinical Laboratory Practice	128	4	**80**	**20**	**100**
4		Clinical Rotation	Clinical Rotation (Clinical Laboratory)	256	8	**-**	**100**	**100**
5		Research Project		192	6	**50 (30+20 viva)**	**-**	**50**
6	Soft core/ elective course	Discipline specific elective paper	DSEC-01-Research Methodology and biostatistics	48	3	**80**	**20**	**100**
7		Generic elective (to choose any one)	GEC- 01-Biomedical waste Management GEC- 02-Basics of Hospital Administration GEC- 03- Basic life support	48	3	**80**	**20**	**100**
Total				800	32	**450**	**200**	**650**

Total Credit for one year duration = 32 Credits

Core theory- 1

Good Clinical Laboratory Practice

Syllabus

Core theory paper I: Good clinical laboratory practice

UNIT I:

Organization and Laboratory personnel:

- Introduction to organization and laboratory personnel
- Standards for organization and laboratory personnel- Documentation, Staff education and evaluation, Staff numbers and Staff identification Record retention

Equipment:

- Introduction to testing,
- Standards for equipment,
- Documentation Guidelines

UNIT II:

Testing facility and operation:

- Introduction to testing facility operation
- Standards for testing facility operation-SOP format, SOP distribution, Document control plan, SOP categories.

Records and reports:

- Introduction to records and reports
- Standards for records and reports- Record retention, Data integrity, Report format, Pertinent reference ranges, Laboratory assays and performance specifications. Assay results, Result modification log errors in test results, Archiving reports on records.

Physical facilities:

- Introduction to physical facilities
- Standards for physical facilities- General space, Temperature and humidity controls, Archiving and storage space and Molecular amplification work area.

UNIT III:

Specimen transport and management:

- Introduction to specimen transport and management.
- Standards for specimen transport and management - SOP, Specimen labelling, Laboratory testing request form, Specimen acceptance / Rejection criteria, Audit trials and chain of custody, Specimen preparation

Test and control:

- Introduction to test and control
- Standards for test and quality control - Quality control programme, Evaluation criteria, Frequency of quality control testing and types of control materials, Review of quality control data, Quality control logs, Corrective action logs, Supervisor review of quality control documentation, Quality control record retention, Labelling and storage of quality control material and reagents, Inventory control, Parallel testing, Water quality testing

UNIT IV:

Quality Management:

- Introduction to quality management
- Standards for quality management - Quality management plan, Internal audits, Testing turnaround time, Laboratory communication plan, Standards for external quality assurance
- Stock management

Verification of performance specification:

- Introduction to performance specification.
- Standards for performance specifications.

UNIT V:

Personnel safety:

- Introduction to personnel safety
- Standards for personnel safety - Personnel safety procedures, Material safety data sheet, Safety policies, Safety Training, Safety incident reporting

Laboratory information system:

- Introduction to laboratory information system
- Standards for laboratory information system : LIMS- Validation, Generation of reports, Audit trials, Access and security, Technical support and preparedness

CORE LAB 01: Good clinical laboratory practice

List of Practicals:

- To prepare Levy Jennings chart, Westgard rule violation and root cause analysis
- To prepare SOP for phlebotomy, laboratory testing process and parameters.
- To conduct method validation and verification studies.
- To conduct precision and accuracy studies and report.
- Reportable range experiment studies.
- Example of analytical sensitivity and specificity studies.
- Evaluation and interpretation of IQC and EQC report
- Laboratory Biostatistics
- Establishment of reference range
- Recovery experiment
- Linearity experiment
- Instrument programming
- Laboratory case studies

University Practical Exam questions (80)

- Sample collection, programme calibrate, preparation of standard and Analysis in an automated analyzer (20marks)
- Interpretation of quality control(10)
- Validation of kits(10)
- Prepare analyse and interpret internal and external quality controls (10marks)
- Laboratory case studies(10marks)
- Project presentation (20 marks)

METHODS OF TEACHING

1. Lecture cum discussion
2. Demonstration
3. Lab visit
4. Practical work record

METHODS OF EVALUATION

1. Written Test
2. Laboratory observation Book
3. Assignments
4. Oral Presentations

Reference Books

- WHO, ICMR, National Institute of Allergy and Infectitious Diseases Guidelines
    - Varley's Practical Clinical Biochemistry by Alan H Gowenhock, publishedbyCBS Publishers and
    - distributors, India, Sixth Edition
    - Practical Biochemistry – Wilson & Walker
    - Clinical chemistry – Marshal
    - Clinical Biochemistry Principle and Practice – PrafulB Godkar
    - Lecture notes on Clinical chemistry –L.G.Whitby
    - Clinical Chemistry – Kaplan
    - Clinical chemistry in diagnosis and treatment – Philip D Mayne
    - Clinical Chemistry – Michael L Bishop
    - Textbook of Clinical Chemistry –Tietz

MODEL QUESTION PAPER

POSTGRADUATE DIPLOMA IN GOOD CLINICAL LABORATORY PRACTICES

Core theory paper I: Good clinical laboratory practice

Time: 3 Hours **Maximum Marks: 80**

Illustrate your answers with suitable diagrams where ever necessary.

Short Essay Questions :(any eight) (8X10=80marks)

1. Describe the total quality management in a clinical laboratory with illustration.
2. Laboratory information system and its applications in a clinical laboratory.
3. Pre-analytical errors and their correction
4. Sample collection and transportation
5. Laboratory safety measures
6. Method validation
7. EQAS
8. CLIA
9. Standard for personnel safety
10. LIS

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POSTGRADUATE DIPLOMA IN GOOD CLINICAL LABORATORY PRACTICES

CORE THEORY PAPER-I- GOOD CLINICAL LABORATORY PRACTICE

BLUE PRINT

Unit No.	Unit	Weightage	Marks Allotted
I	Organization and Laboratory personnel, Equipment	12.5 %	10
II	Testing facility and operation, Records and reports, Physical facilities	25 %	20
III	Specimen transport and Management, Test and control	25 %	20
IV	Quality Management, Verification of performance specification	25 %	20
V	Personnel safety, Laboratory information system	12.5 %	10
	TOTAL	100%	80

Core theory- 2

Ethics & Bio-safety in laboratory services

Syllabus

Core Theory paper II: Ethics & Bio-safety in laboratory services

Unit I:

- Co-operation and working relationship with other health professionals
- Confidentiality of patient information and test result
- Dignity and privacy of patient

Unit II:

- Responsibility from acquisition of the specimen to the production of data
- Accountability for quality and integrity of clinical laboratory services
- Institutional ethical committee and its role
- Health & Medical surveillance

Unit III:

- Laboratory ethics of Bio-Safety.
- Code of good and safe laboratory practice for support staff and responsibilities of the workers regarding Biosafety.
- ISO rules for laboratory medicine.

Unit IV:

- Set up of a laboratory on the basis of safety priority and Laboratory Biosafety Guidelines.
- Laboratory Biosafety Level Criteria(BSL-1-4).
- Handling, transfer and shipment of specimen. Decontamination and disposal. Treatment and disposal technologies for health- care waste.

Unit V:

- General Safety checklist
- Hazardous properties of instruments and Laboratory chemicals. Laboratory first-aid measures and kit.
- Safety equipments, Safety signs ISO 15189 2012guidelines
- ICMR GCLP guidelines
- IFCC Ethics guidelines

MODEL QUESTION PAPER

POSTGRADUATE DIPLOMA IN GOOD CLINICAL LABORATORY PRACTICES

Core theory paper II: Ethics & Bio-safety in laboratory services

Maxmarks:80 Duration:3Hours

Short Essay Questions:(any eight) (8X10=80marks)

1. Confidentiality of patient information and test result
2. Ethics in pre-analytical, analytical and post-analytical errors.
3. Institutional ethical committee and its role
4. Laboratory first-aid measures and kit.
5. Laboratory ethics of Bio-Safety
6. Accountability for quality and integrity of clinical laboratory services
7. Handling, transfer and shipment of specimen.
8. Decontamination and disposal.
9. General Safety checklist
10. Set up of a laboratory on the basis of safety priority and Laboratory Biosafety Guidelines

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POSTGRADUATE DIPLOMA IN GOOD CLINICAL LABORATORY PRACTICES

CORE THEORY PAPER II: ETHICS & BIO-SAFETY IN LABORATORY SERVICES

BLUE PRINT

Unit No.	Weightage	Marks Allotted
I	12.5 %	10
II	25 %	20
III	25 %	20
IV	25 %	20
V	12.5 %	10
	100%	80

DISCIPLINE SPECIFIC ELECTIVE COURSE-01

RESEARCH METHODOLOGY & BIOSTATISTICS

SYLLABUS

DISCIPLINE SPECIFIC ELECTIVE COURSE-01

RESEARCH METHODOLOGY AND BIOSTATISTICS **CREDIT 3**

UNIT I **10 HOURS**

Research Methodology : Meaning , objectives and types of research, research approaches, significance of research. Research and scientific methods, research process and criteria of good research Definition and identification of a research problem – Selection of research problem, Justification , theory , hypothesis , basic assumptions, limitations and delimitations of the problems.

UNIT II **9 HOURS**

Introduction of bio statistics – Meaning and its scope; Population and Sample, Parameter and Statistics; types of statistical data; Diagrammatic representation data; Mean, Median, Mode. Standard deviation. Coefficient of variation. Skewness and Kurtosis. Probability – Definition, Axioms of Probability; addition and Multiplication theorem.

UNIT III **9 HOURS**

Concept of correlation – Simple, Partial regression- Simple Methods of Association – Chi square test of association of attributes, Goodness of fit.

UNIT IV **10 HOURS**

Concept of Hypothesis – Null, Alternative Hypothesis. Type I and type II errors. Sampling distribution Standard error t & F distribution; t test based on single samples, two sample mean. Paired samples, F test two sample variances f test for several mean (one way ANOVA only). Z – test for proportion – one sample, two sample, MS – excel support for above expression.

UNIT V **10 HOURS**

Framing proposal for acquiring grants: the question to be addressed – rationale and importance of the question being addressed – Empirical and theoretical framework – Presenting pilot study / data or background information – Research proposal and time frame- Specificity of methodology- Organization of different phases of study- Expected outcome of study and its implications – Budgeting – Available infrastructure and resources – Executive summary

Text books and Reference materials

1. Bandarkar, P.L and Wilkinson T.S (2000): Methodology and Techniques of social Research , Himalaya Publishing House, Mumbai.

2. Copper, H.M.(2002) Integrating research: A guide for literature review (2nd Edition)California; Sage

3. Harman,E & Montages , L(Eds.)2007). The thesis and the book, New Delhi; Vistar.

4.Mukherjee, R(1989); the quantity of Life: Valuation in school research , Sage Publications, New Delhi.

5. Stranss, A and Corbin. J.(1990):Basis of Qualitative Research : Grounded Theory Procedures and Techniques, Sage Publications, California

GENERIC ELECTIVE

COURSE-01

BIOMEDICAL WASTE MANAGEMENT

SYLLABUS

GENERIC ELECTIVE COURSE-01

BIOMEDICAL WASTE MANAGEMENT

Course Description

The increasing amount of Biomedical wastes (BMW) being generated is becoming a serious problem to hospitals and has significant adverse impacts on public health and occupational health if improperly handled. Biomedical waste requires utmost care in handling, collection, processing and the disposal due to inherent hazards of the waste. The basic goal of the course is to provide fundamentals of and biomedical wastes and various aspects of their management right from generation through collection and disposal. Special emphasis will be given to the system approach to managing these wastes to meet regulatory requirements.

Learning objectives

- To sensitive the students about health care waste and its impact on health and environment
- Acquaint the students to existing legislation, knowledge and practices regarding health care waste.

Learning outcomes

At the end of the course the student will be able to

- Posses the knowledge on the sources of generation, of hazardous and non – hazardous waste in health care settings and research laboratories.
- Demonstrate understanding on the environmental and occupation hazards of improper BMW management
- Understand the good practices for a systematic approach in the management of BMW
- Gain knowledge in various management strategies and technical solution in BMW management, treatment and disposal.
- Be familiar with the applicable legislation and regulation for treatment and disposal.

UNIT I: Introduction to hospital waste

- Definition classification of hospital wastes.
- Types and composition : Types of solids, liquids, sharps, blood and blood tissue, radioactive material, biological and chemical material.
- Hospital effluents: Nature and composition, Levels if generation in a small clinic nursing home, small and large hospital, storage of hospital waste; Types of bags and containers used for usage.

UNIT II: Biomedical Waste Management Guideline

- Requirement
- Documentation of Biomedical waste types and guidelines
- Biomedical wastes (Management & Handling) Rules , 1998; and amendments.

UNIT III: Principles of Biomedical Waste Management

- Segregation of biomedical waste.
- Handling and transport of hospital waste; Authorization and accidental spilling
- Methods/ treatments required for disposal of pathogens
- Waste disposal methods
- Techniques of waste management
- Protocols of HW management

UNIT IV: Waste prevention

- Waste reduction activities
- Waste recycling,

UNIT V: Biomedical Waste Treatment facility

- Introduction, location, land requirements,
- Coverage area, types of equipment
- Infrastructure requirements,
- Record keeping,
- Waste collection, transport and storage facilities, precautions required.

Text Books:

1. Sustainable Biomedical Waste Management, P.K.Behera, 2nd Edition .2008.
2. Biomedical Waste Management, R.RadhaKrishnan, 1st edition,2005
3. The environmental Protection Act, 1986

GENERIC ELECTRIVE COURSE 02

Basics of Hospital Administration

NAME OF THE SUBJECT PAPER : Basics of Hospital Administration
DURATION OF THEORY CLASSES : 64 Hrs.
EXAMINATION : 50 Marks (40 U + 10 IA) NO UNIVERSITY PRACTICAL EXAMINATION
DURATION OF THEORY EXAMINATION : 1 ½ Hrs.
YEAR IN WHICH THE SUBJECT PAPER IS TAUGHT : I YEAR

THEORY (DURATION 64 Hours)
COURSE OBJECTIVES

- **To provide orientation about the hospital functions**
- **To familiarize students with the basics concepts of hospital management**

UNIT: I ORGANISATION OF A HOSPITAL AND ITS DEPARTMENTS

1. **Organogram**
2. **Vision, Mission & Values,Logo**
3. **Patient Service Points – Clinical & Non-Clinical (OPD's, A&E, MHC, Wards, ICU's, OT's, etc.)**
4. **Scope of Services (Medical & Supportive Services)**

UNIT:II HOSPITAL POLICIES & PROCEDURES

1. **Registration Process**
2. **OP/IP Billing**
3. **Admission Process**
4. **Discharge Process**
5. **Financial counseling**
6. **Visitors Policy**
7. **Feedback forms.**

UNIT: III MEDICAL RECORS MANAGEMENT/LEGAL ASPECTS

1.Types of Medico legal cases 2.SOP's for handling MLC
3.Medical Records -Forms,consents, registers used in hospitals

UNIT:IV QUALITY MANAGEMENT

1. **Quality - Brief Introduction**
2. **Code of Conduct for healthcare professionals 3.Patient rights & responsibilities**
4. **Incident Reporting**
5. **Quality Indicators**
6. **List of Licenses to be obtained to run a Hospital College**
7. **Accreditation – ISO/NABH/JCI**

UNIT: VOCCUPATIONAL SAFETY

1. **Biomedical Waste Management**
2. **Hospital Spill Management**
3. **Usage of PPE**
4. **Emergency Codes**
5. **Fire Safety Management**
6. **Hospital Infection Control**

UNIT: VIORGANISATIONAL BEHAVIOUR

1. **Communication with patients/health care professionals**
2. **Grooming standards**
3. **Time Management**
4. **Grievance Handling, Interdisciplinary Committee**

5. **Leadership**

LEARNING OUTCOMES

Students will have an overview of hospital functions, processes and patient management.