# BLDE
## (DEEMED TO BE UNIVERSITY)
Accredited with 'A' Grade by NAAC (Cycle-2)

# Choice Based Credit System (CBCS)

# Curriculum

# B.Sc. Programme in Hospital Information Management
## 2021-22

## NOTIFICATION

Sub: Choice Based Credit System (CBCS) based Graduate Curriculum

Ref: 1. Minutes of the 3$^{rd}$ BoS, AHS meeting held on June 05, 2021
   2. Minutes of the 7$^{th}$ meeting of Standing Committee of the Academic Council of the University held on June 14, 2021
   3. Resolution by the circulation approval of Board of Management dtd.18-06-2021
   4. The Hon'ble Vice-Chancellor approval vide order No.261/1, dtd.28-06-2021

The Board of Management is pleased to approve the Choice Based Credit System (CBCS) based Curriculum for B.Sc. Programme in **Hospital Information Management (HIM).**

The curriculum shall be effective from the Academic Session 2021-22 onwards, for the B.Sc. Programme in Hospital Information Management (HIM) in the Constituent College of the University viz. Shri B. M. Patil Medical College, Hospital and Research Centre, Vijayapura.

REGISTRAR
**REGISTRAR**
**BLDE (Deemed to be University)**
**Vijayapura-586103. Karnataka.**

To,
The Dean, Faculty of Allied Health Sciences,
Shri B. M. Patil Medical College,
Hospital and Research Centre,
Vijayapura

Copy to:
- The Secretary, UGC, New Delhi
- The Secretary, NMC, New Delhi
- The Dean, Faculty of Medicine
- The Controller of Examinations
- The Vice Principal (Academics)
- The Prof. & HODs Pre, Para and Clinical Departments
- The Co-ordinator/Director, IQAC
- The Co-ordinator, UG Programmes, Allied Health Sciences
- PS to the Hon'ble Chancellor
- PS to the Hon'ble Vice-Chancellor

## Vision

To be a leader in providing quality medical education, healthcare & to become an Institution of eminence involved in multidisciplinary and translational research, the outcome of which can impact the health & the quality of life of people of this region.

## Mission

- To be committed to promote sustainable development of higher education, including health science education consistent with statutory and regulatory requirements.

- To be centre of excellence with thrust on multidisciplinary and translational research.

- Make use of academic autonomy to identify dynamic educational programs.

- To adopt the global concepts of education in the healthcare sector.

## PREAMBLE

The Department of Hospital Information Management System under Allied Health Sciences of BLDE (Deemed to be University) offers undergraduate under the UGC-Choice Based Credit System (CBCS) pattern. The CBCS pattern offers a platform for interdisciplinary learning among our students. This pattern provides choice for students to select from the prescribed courses (core, elective, allied &soft skills). Under this CBCS, the requirement for awarding a degree is prescribed in terms of number of credits to be completed by the students. The courses offered has a mandate to coordinate the UGC regulations in a manner that uniform quality control regulations and procedures are strictly adhered to and high academic standards are maintained, in addition to providing our students with high quality academic, Basic and Clinical Research and ICT, other support services.

The Semester Grade Point Average (SGPA) is measured as performance of work done by the student in a semester. The Cumulative Grade Point Average (CGPA) is measured as cumulative performance of a student in all semesters in the courses taken by the student.

The mission of the undergraduate studies offered at Department of Hospital Information Management System of Allied Health Sciences is to promote excellence amongst our undergraduate students through responsive practical teaching, research and supervision.

The main objective of the courses offered at Department of Hospital Information Management System Allied Health Sciences is interdisciplinary in nature that enables over all student development and enhanced learning experience. Each course paper provides hands-on-experience that translates theory to practical. The curriculum is supported with Education and practical trips and other extension and extracurricular activities wherever required.

The students are encouraged to undergo and acquire scientific knowledge by frequently participating in different subject related workshops, conferences, research activities with inter and multidisciplinary collaborative research groups.

## UNDERGRADUATE PROGRAMME REGULATIONS

1. **Title and Commencement**

These regulations shall be called as "The Regulations for the **B.Sc. Hospital Information Management System** Degree Program – 2020-2021 of the BLDE (Deemed to be University) Allied Health Sciences Vijayapura". They shall come into effect from the Academic Year 2020-2021. The regulations framed are subject to modifications from time to time by the authorities of the BLDE (Deemed to be University) Allied Health Sciences Vijayapura.

2. **Minimum qualification for admission**

Candidate shall have passed 10+2 examination conducted by the respective state/central government authorities recognized as equivalent to 10+2 examination with English as one of the subjects and Physics, Chemistry, Mathematics (P.C.M) and Biology (P.C.B/P.C.M.B.) OR 10+2 (Arts or Commerce) examination passed with certificate of Diploma in Hospital Information Management Science.

3. **Duration of the program**

The course of study for BSc Hospital Information Management System shall be minimum period of six semesters (three academic years) and maximum period of 12 semesters (6 academic years) for completion of a BSc Hospital Information Management System course. The curriculum and syllabus for the program shall be prescribed from time to time by BLDE (Deemed to be University) Vijayapura.

4. **Medium of instruction and examinations**

The medium of instruction and examination shall be in English.

5. **Working days in each semester:**

There are two semesters in a year. Each semester shall consist of not less than 90 working days.

6. **Attendance and progress**

No candidate who has put in less than 75% of the full attendance for the course shall be permitted to take the semester examination of the course concerned. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations.

7. **Program/Course credit structure:**

As per the philosophy of Choice Based Credit System (CBCS), quantum of academic work viz. theory classes, practical classes, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/extra-curricular activities is dependent upon the quantum of work expected to be put in for each

of these activities per week.

8. **Semesters:**

The semester that begins in July (July to December) is known as Odd Semester and the semester that begins in December (January to June) is known as Even Semester.

9. **Curriculum:**

Department of Hospital Information Management System of Allied Health Sciences has a prescribed course structure, which in general terms is known as Curriculum/Course of Study/Programme. It prescribes papers/courses to be studied in each semester. This includes all the curricula and course contents. Except for the language curricula, for all other curricula the medium of the instruction, examination, seminar, and project work should be in English.

10. **Credit assignment:**

**10.1 Theory and Laboratory courses:**

Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and Practical (P) courses consist of hours spent in the laboratory/ yoga practical. Credits (C) for a course is dependent on the number of hours of instruction per week in that course and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having four lectures per week throughout the semester carries a credit of 4. Similarly, a practical having two laboratory hours per week throughout semester carries a credit of 1.

**10.2 Minimum credit requirements**

The minimum credit points required for award of a BSc Hospital Information Management System degree by BLDE (Deemed to be University) Allied Health Sciences, Vijayapura is 140. These credits are divided into Theory courses and Practical over the duration of six semesters. The credits are distributed semester-wise as shown in Table-I, Courses generally progress in sequences, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

11. **Academic work**

A regular record of attendance both in Theory and Practical shall be maintained by the teaching staff of respective courses.

12. **Course of study:**

The course of study for BSc Hospital Information Management System shall include Semester wise Theory & Practical

**Table – I: Semester wise credits distribution**

| Sl. No. | Semester | Credit Points |
|---|---|---|
| 1 | First | 21 |
| 2 | Second | 24 |
| 3 | Third | 25 |
| 4 | Fourth | 23 |
| 5 | Fifth | 23 |
| 6 | Sixth | 24 |
| 7 | Extracurricular/ Co-curricular activities: Presenting at National/International Conferences, Yoga competition participation etc. | 02* |
| | **Total** | **140** |

* The credit points assigned for extracurricular and or co-curricular activities shall be given by the HOD/Coordinator and the same shall be submitted to the Controller of Examinations. The criteria to acquire this credit point shall be definedby the Dean AHS & HOD/Coordinator from time to time.

## 13. Program Committee

**13.1** The BSc Hospital Information Management System programme shall have a Programme Committee constituted by the Dean Allied Health Sciences/ Head of the department

**13.2** The composition of the Programme Committee shall be as follows: Among the faculty member will be the Chairperson; One Teacher from each department handling BSc Hospital Information Management System courses; and three student representatives of the programme (one from eachacademic year), nominated by the Head of the department.

**13.3** Duties of the Programme Committee:
i. Periodically reviewing the progress of the classes.

ii. Discussing the matters concerning curriculum, syllabus and the conduct of classes.

iii. Discussing with the course teachers on the nature and scope of assessment for the course and the same shall be announced to the students at the beginning of respective semesters.

iv. Communicating its recommendation to the Head of the department on academic matters.

v. The Programme Committee shall meet at least thrice in a semester preferably at the end of each Sessional exam (Internal Assessment) and before the end semester exam.

## 14. Examination:

The internal assessment in each semester and end semester examinations will be conducted.

### 14.2 Internal assessment: Continuous mode

The Continuous Internal Assessments may be in the form of a combination of periodicaltests (two), assignments (two) and seminar (one). The marks allocated for Continuous mode of Internal Assessment shall be awarded as per the scheme given below.

### Table II:

**(a) Details of Sessional Assessment / Internal Assessment For 25 Marks**

| Examinations | Assessment | Marks |
|---|---|---|
| **Test** | Average of the two test performances | **15** |
| **Assignment** | Average of the two submitted | **04** |
| **Seminar** | Average of two Presentations on given topics | **04** |
| **Attendance** | Refer Table -III | **02** |

**(b) Details of Sessional Assessment / Internal Assessment for 20 Marks**

| Examinations | Assessment | Marks |
|---|---|---|
| **Test** | Average of best two test performances | **10** |
| **Assignment** | Average of the two submitted | **04** |
| **Seminar** | Average of two Presentations on given topics | **04** |
| **Attendance** | Refer Table -III | **02** |

### Table- III: Guidelines for the allotment of marks for attendance/semester

| | |
|---|---|
| Less than 75% | 0 marks |
| 75-89% | 1 mark |
| 90% and above | 2 marks |

### 14.3. Sessional/Internal Assessment Exams

Two Sessional/Internal Assessment exams shall be conducted for each theory / practical course as per the schedule fixed by the department. The scheme of question paper for theory and practical sessional/Internal Assessment examinations is given below. The average marks of two Sessional exams shall be computed for internal assessment as per the requirements given in tables III.

Sessional/Internal Assessment exam shall be conducted for 40+10 marks for theory + Practical and shallbe computed for 15 marks except for Biostatistics and Biochemistry practical where theSessional/Internal Assessment exam shall be conducted for 20 marks and shall be computed for 5 marks each.

**Question paper pattern for Theory Sessional/Internal Assessment examinations:**

| Time: 1 Hours | Maximum Marks:40 |
|---|---|
| I. Long Essay (Answer any **one** out of 2 questions) | 1 x 10= 10 |
| II. Short Essay (Answer any **two** out of 3 questions) | 3 x 5 = 15 |
| III. Short Answers (Answer **all** 5 questions) | 5 x 3= 15 |

**Question paper pattern for practical sessional/Internal Assessment examinations:**

| Time: 1 Hours | Maximum Marks:30 |
|---|---|
| I. | |
| II. | |
| III. Viva voce | |

**End semester Question Paper Pattern**

| Time: 3 Hours | Maximum Marks:80 |
|---|---|
| PART A:  **Long Essay** <br> Answer **any one** out of two questionsAll questions carry equal marks | (1 X 10 = 10 Marks) |
| PART B: **Short Essay** <br> Answer **any Eight** out of Nine questionsAll questions carry equal marks | (8 X 5 = 40 marks) |
| PART C: **Short Answer** <br> Answer **ALL** questions <br> All questions carry equal mark | (10 X 3 = 30 marks) |

### 15. Re-examination/ Supplementary of end semester examinations:

**15.1** Students who have missed CIA on valid reason may apply for retests to the Course Teacher concerned specifying the reason for the absence and the Course Teacher shall conduct a retest when satisfied with the validity of the reasons given for the absence. Such conduct must get the approval from the Dean Allied Health

Sciences/HOD.

**15.2** Re-examination of end semester examination shall be conducted as per the schedule given in table IV. The exact dates of examinations shall be notified from time to time.

**Table – IV: Tentative schedule of end semester examinations:**

| Semester | Exam Schedule |
|----------|---------------|
| I, III, V | November / December |
| II, IV, VI | May / June |

## 16. Revaluation and Re-totalling and Photocopy of answer papers:

There is no provision for revaluation of the answer papers in any examination. However, the candidates can apply for re-totalling and Photocopy of answer script by paying prescribed fee.

## 17. Duration for completion of the program of study

The duration for the completion of the program shall be fixed as double the actual duration of the program i.e. 6 years and the students must pass within the said period, otherwise they must get Re-Registration.

## 18. Carry forward of marks

**18.1 Carry over benefit:** The candidate can carry forward for classes only till final semester irrespective of university result status

However, a candidate shall be eligible to register for odd semester provided he/she secured a minimum of 4 grades in each course of the jest concluded even semester and an average of 5 grades in the entire course to pass the program for all Postgraduate & Undergraduate course under Allied Health Sciences

A candidate should clear all the course of first semester, to enter into third semester. Similarly second semester courses should be cleared before entering fourth semester. Third semester courses should be cleared before entering fifth semester.

If a candidate has failed in 1st semester, he can register for second semester and attend the classes .He will have to clear all the courses of first semester before he joins the third semester. Similarly second semester courses should be cleared before entering fourth semester. Third semester courses should be cleared before entering fifth semester. However the candidate must have cleared all previous courses to appear for the sixth semester university examination.

**18.2 Grace marks:** for all Postgraduate & Undergraduate course under Allied Health Sciences.

Students shall be eligible for grace marks, proved he/she appeared in all the papers prescribed for the examination.

Maximum up to 5 grace marks may be allowed for passing, spread over between subjects.

No grace marks will be awarded in internal evaluation.

No grace marks for promotion higher class, for example 2$^{nd}$ class to 1$^{st}$ class and 1$^{st}$ class to distinction etc.

## 19. Academic Progression:

**19.1** No student shall be admitted to end semester examination unless he/she fulfils the norms given in para 6 (Attendance and progress).

**19.2** A candidate who has failed in one or more subjects in the previous semesters should be cleared six months before the end of the final year semester.

**19.3** A student shall be eligible to get his/her CGPA upon successful completion of the courses of I to VI semesters within the stipulated time period as per the norms specified in para 16 (Duration of course).

## 20. Grading of performances:
### 20.1 Letter grades and grade points allocations:

Based on the performances, each student shall be awarded a final letter grade at the end of the semester for each course. The letter grades and their corresponding grade points are given in Table –V.

**Table V: Letter grades and grade points equivalent to Percentage of marks and performances**

| Percentage of Marks Obtained | Letter Grade | Grade Point | Performance |
|---|---|---|---|
| 90.00 – 100 | O | 10 | Outstanding |
| 80.00 – 89.99 | A | 9 | Excellent |
| 70.00 – 79.99 | B | 8 | Good |
| 60.00 – 69.99 | C | 7 | Fair |
| 50.00 – 59.99 | D | 6 | Average |
| Less than 50 | F | 0 | Fail |
| Absent | AB | 0 | Fail |

A learner who remains absent for any end semester examination shall be assigned a letter grade of AB and a corresponding grade point of zero. He/she should reappear for the said evaluation/examination in due course.

## 21. The Semester grade point average (SGPA)

The performance of a student in a semester is indicated by a number called 'Semester Grade Point Average' (SGPA). The SGPA is the weighted average of the grade points obtained in

all the courses by the student during the semester. For example, if a studenttakes five courses (Theory/Practical) in a semester with credits C1, C2, C3, C4 and C5 and the student's grade points in these courses are G1, G2, G3, G4 and G5, respectively, and then students' SGPA is equal to:

$$\textbf{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

The SGPA is calculated to two decimal points. It should be noted that, the SGPA for any semester shall take into consideration the F and ABS grade awarded in that semester. For example, if a learner has a F or ABS grade in course 4, the SGPA shall then be computed as:

$$SGPA = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4 * ZERO + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

## 22. Cumulative Grade Point Average (CGPA)

The CGPA is calculated with the SGPA of all the VI semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all VI semesters and their courses. The CGPA shall reflect the failed status in case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA shall only reflect the new grade and not the fail grades earned earlier. The CGPA is calculated as:

$$CGPA = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6 + C_7S_7 + C_8S_8}{C_1 + C_2 + C_3 + C_4 + C_5 + C_6 + C_7 + C_8}$$

where $C_1, C_2, C_3,$ is the total number of credits for semester I, II, III, and $S_1, S_2, S_3,$ is the SGPA of semester I, II, III, .... .

## 23. Declaration of class

| | |
|---|---|
| First Class with Distinction | = CGPA of 8.00 and above |
| First Class | = CGPA of 7.00 to 7.99 |
| Second Class | = CGPA of 6.00 to 6.99 |
| Pass Class | = CGPA of 5.00 to 5.99 |

## 24. Award of Ranks:

Ranks and Medals shall be awarded based on final CGPA. However, candidates who fail in one or more papers during the BSc (Yoga) program shall not be eligible for award of ranks. Moreover, the candidates should have completed the BSc (Yoga) program in minimum prescribed number of years, (Three years) for the award of Ranks.

## 25. Award of degree:

Candidates who fulfil the requirements mentioned above shall be eligible for award of degree.

## 26. Re-admission after break of study

Candidate who seeks re-admission to the program after break of study must get the approval from the BLDE (DU) by paying a condonation fee. No condonation is allowed for the candidate who has more than 2 years of break up period and he/she must re-join the program by paying the required fees.

## Overview of B.Sc. Hospital Information Management Curriculum

| SEMESTER I | Credit hrs Theory Practical | Credit Points |
|---|---|---|
| 1.  Introduction to National Healthcare System (Core) | 60 Theory 45 Practical | 3+3=6 |
| 2.  Basic computers and information science - I (Core) | 60 Theory 45 Practical | 3+3=6 |
| 3.  Medical law & ethics -I (Core) | 60 Theory 45 Practical | 3+3=6 |
| 4.  Communication and soft skills (Elective) | 60 Theory | 3 |
| 5.  Environmental Sciences (EVS) (Elective) | 60 Theory | 3 |
|  |  |  |
| **SEMESTER II** |  |  |
| 1.  Medical Terminology. Introduction to Quality and patient safety (Core) | 60 Theory 45 Practical | 3+3=6 |
| 2.  Basic computers and information science - II(Core) | 60 Theory 45 Practical | 3+3=6 |
| 3.  Medical law & ethics -II (Core) | 60 Theory 45 Practical | 3+3=6 |
| 4.  Medical Terminology ( Basics in Anatomy) | 60 Theory 45 Practical | 3+3=6 |
| 5.  (Elective) | 60 Theory | 3 |
| 6.  (Elective) | 60 Theory | 3 |
| **SEMESTER III** |  |  |
| 1.  Research Methodology and Bio statistics, Hospital Statistics (Core) | 60 Theory 45 Practical | 3+3=6 |
| **2.**  Professionalism and Values(Core) | 60 Theory 45 Practical | 3+3=6 |
| 3.  Principals of Management | 60 Theory 45 Practical | 3+3=6 |
| 4.  Healthcare Information Technology management- I | 60 Theory 45 Practical | 3+3=6 |
| 5.  (Elective) | 60 Theory | 3 |
| 6.  (Elective) | 60 Theory | 3 |
| **SEMESTER IV** |  |  |
| 1.  Healthcare Information Technology management- II | 60 Theory 45 Practical | 3+3=6 |
| 2.  Hospital Information System (HIS) | 60 Theory 45 Practical | 3+3=6 |
| 3.  Fundamentals of Management | 60 Theory 45 Practical | 3+3=6 |

| | | |
|---|---|---|
| 4.  Quality assurance in Health care and Financing | 60 Theory<br>45 Practical | 3+3=6 |
| 5.  (Elective) | 60 Theory | 3 |
| 6.  (Elective) | 60 Theory | 3 |
| **SEMESTER V** | | |
| 1.  Electronic Health Records | 60 Theory<br>45 Practical | 3+3=6 |
| 2.  Fundamental of Health Informatics, Clinical coding and Terminology- I | 60 Theory<br>45 Practical | 3+3=6 |
| 3.  Human Resource Management-I | 60 Theory<br>45 Practical | 3+3=6 |
| 4.  Fundamentals of Hospital Administration, CPA &, Health Insurance- I | 60 Theory<br>45 Practical | 3+3=6 |
| 5.  (Elective) | 60 Theory | 3 |
| 6.  (Elective) | 60 Theory | 3 |
| **SEMESTER VI** | | |
| 1.  Fundamental of Health Informatics, Clinical coding and Terminology- II | 60 Theory<br>45 Practical | 3+3=6 |
| 2.  Fundamentals of Hospital Administration, CPA &, Health Insurance- II | 60 Theory<br>45 Practical | 3+3=6 |
| 3.  Medical Transcription, Telemedicine & Healthcare Policies & Standards | 60 Theory<br>45 Practical | 3+3=6 |
| 4.  Human Resource Management-II | 60 Theory<br>45 Practical | 3+3=6 |
| 5.  (Elective) | 60 Theory | 3 |
| 6.  (Elective) | 60 Theory | 3 |
| | | **Total 174** |

**SYLLABUS**

**FIRST SEMESTER**

Basic of informatics

1.  **Introduction to National Healthcare System**
Introduction to healthcare delivery system, National Health Program, Health scenario of India- past, present and future, Demography & Vital Statistics, Epidemiology.

2.  **Basic computers and information science (Part I)**
Introduction to computer, Input output devices, Processor and memory, Storage Devices, windows, MS-Word, Introduction to Excel, power-point, Operating System, Computer networks, Internet and its Applications, Application of Computers in clinical settings.

3.  **Medical law & ethics (Part I)**
Medical ethics, Code of conduct, Basic principles of medical ethics, Malpractice and negligence, Autonomy and informed consent, Care of the terminally ill, Organ transplantation, Medico legal aspects of medical records, obtaining an informed consent.

4.  **Medical Terminology (Basics in Anatomy)**
Introduction to Medical Terminology, Terms, Skeletal System, Muscular System, Integumentary System, Cardiovascular System, Respiratory System, Gastro-Intestinal System, Genito-Urinary System, Endocrine System, Nervous System, Sensory Organs, Multiple-System Diseases.

5.  **Communication and soft skills (Elective)**
Basic Language Skills, Business Communication Skills, Basic concepts & principles of good communication, Special characteristics of health communication, Types & process of communication, Barriers of communication & how to overcome, Reading Skills, Listening skills, Speaking Skills, Writing Skills, Study Skills, Effective Communication in Hospitals

6.  **Environmental Sciences (Elective)**

**SECOND SEMESTER**
1.  **Medical Terminology: Introduction to Quality and patient safety**
Quality assurance and management, Basics of emergency care and life support skills, Bio medical waste management, Infection prevention and control.

2.  **Basic computers and information science (Part I)**
Introduction to computer, Input output devices, Processor and memory, Storage Devices, windows, MS-Word, Introduction to Excel, power-point, Operating System, Computer networks, Internet and its Applications, Application of Computers in clinical settings.

3.  **Medical law & ethics (Part II)**
Medical ethics, Code of conduct, Basic principles of medical ethics, Malpractice and

negligence, Autonomy and informed consent, Care of the terminally ill, Organ transplantation, Medico-legal aspects of medical records, obtaining informed consent.

4. **Research methodology & Management  (Part I)**
**Research Methodology and Bio statistics, Hospital Statistics**
Research Methodology: Introduction to research methods, Identifying research problem, Ethical issues in research, Research design, Types of Data, Research tools and Data collection methods, Sampling methods, Developing a research proposal, Research in medicine and health care, Clinical research and clinical trials, Defining the research question (problem), Determining a research design and method, Data collection procedures, Data analysis, Presenting results.
5. **(Elective)**
6. **(Elective)**


## THIRD SEMESTER

1. **Research methodology & Management  (Part II)**
**Research Methodology and Bio statistics, Hospital Statistics**
Bio-Statistics :Definition, Role, Variables, Scales of Measurement, Organization of data, Types of class intervals, Frequency Distribution, Presentation of data, Measures of Variation, Partition values, Probability, Introduction to Probability Distribution: Binomial distribution, Poisson distribution and Normal distribution, Sampling, Introduction to Hypothesis testing, Chi-square Test

Hospital Statistics: Definition, Sources of Hospital Statistics, Important Rates, Ratio and Percentages with Formula, Uses and Limitations of Hospital Statistics, Hospital Statistics Reporting.

2. **Professionalism and Values**
Professional values, Personal values, Attitude and behavior, Code of conduct, professional accountability and responsibility, misconduct, team efforts, Cultural issues in the healthcare environment.

3. **Principals of Management**
Introduction to management, Strategic Management, Foundations of Planning, Planning Tools and Techniques, Decision Making, conflict and stress management, Managing Change and Innovation, Understanding Groups and Teams, Leadership, Time Management, Cost and efficiency.

4. **Healthcare Information Technology management (Part I)**
Healthcare Information Technology
Computer Applications and Technologies in Healthcare
Office Applications - Word processor, electronic spreadsheet, database management, and presentation software programs.
Database – Definition, terms, common function, Basic data processing, Database and spreadsheet operations
5. **(Elective)**

6. **(Elective)**

# FOURTH SEMESTER

### 1. Healthcare Information Technology management (Part II)

Database Management System – Introduction to database management system, design, development, deployment, and evaluation of database systems, data integrity, relational normalization theory, security, privacy, and concurrence control.

Basic ICD-10 Coding - medical nomenclature and classification systems, ICD-10 structure, conventions, and guidelines for coding in hospitals and physicians offices.

### 2. Hospital Information System (HIS)

Electronic Medical Records, Personal Health Records, Telemedicine.

Organizational Development and Planning in Health Information Management:
Leadership, management, organizational structures theory, accreditation requirements, licensing regulations, and certification requirements relevant to department/organization, financial management and budgeting, Strategy development, Policy development, agendas, lead meetings, maintain documentation, and follow up, Effective communication and negotiation skills, stakeholder analysis.

### 3. Fundamentals of Management

Introduction to Management, Principles of Management, Coordination, Planning, Decision Making, Organization, Communication, Staffing, Training and Development, Performance Appraisal, Promotions, Directing, Motivation, Counselling, Mentoring, Leadership.
Professional Practice in Health Information Management
Functions and Roles, Professional Image, Inter and Intra personal relations, Professional Issues, Communication, Technology, Time and Stress Management.
Health Information Management II & Nomenclature:
Informatics and Health Information Management - Introduction, Health care delivery systems, Informatics in Health Care, Health Information Management profession, Data and formation management, Information systems Development
Aggregate Health care data - Secondary records and Health care database, Clinical classification and Terminologies, Reimbursement methodologies
Nomenclature: Introduction, Statistical classification, choosing a classification system, other classification, Encoding system.

### 4. Quality assurance, Financing & E.H.R

Quality Assurance in healthcare – Medical Audit, Quality as a concept, Quality assurance in Hospital, Tools of evaluating quality in medical care, Barriers, Quality and customer orientation, ISO 9000 Series.
Healthcare financing
National health spending, paying for healthcare, Basics of Health Insurance, Different types of healthcare financing in India
Health insurance, Types of health insurance, Social health insurance, Health insurance in India.

5. **(Elective)**
6. **(Elective)**

## FIFTH SEMESTER

### 1. Electronic Health Records

EHR – definitions, components, merits & demerits, Preliminary steps in implementation of EHR , Issues and challenges in implementation of HER, Planning for the introduction of EHR , Factors to be considered when developing EHR & implementation plan , Implementation plan, Laboratory Information system, Pharmacy Information system, Picture archiving and communication system, order sets, provider order, point of care charts, clinical decision support system

### 2. Fundamental of Health Informatics, Clinical coding and Terminology (Part I)

Fundamentals of Health Informatics & Data Security

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)

### 3. Human Resource Management (Part I)

Management and leadership, motivation, team building, communication, productivity, performance appraisal, recruitment, job development, training, performance improvement, and revenue cycle.

### 4. Fundamentals of Hospital Administration, CPA &, Health Insurance (Part I)

Hospital Organizations and Administration and Consumer Protection Act:
Hospital Organization and Administration: Introduction to Hospital Administration, Principles of Organizational Management, Managing People ( Human Resources ) , Clinical Services, Nursing Services and Wards, Product-based services, Diagnostic Services (Radiology, Laboratories, Blood Bank, etc.), Patient Services (non-medical), Managing Support Services, Hospital Infrastructure, Hospital Information Systems, Managing the Organization. Laws relating to Hospital Administration: Structure of Indian Judicial System, Medico-legal cases, Law of Contract, Liability and Compensation, Consumer Protection Act 1986, Consent, Medical Council of India.

5. **(Elective)**
6. **(Elective)**

# SIXTH SEMESTER

### 1. Fundamental of Health Informatics, Clinical coding and Terminology (Part II)

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.

International Classification of Diseases (ICD-10) and Surgical Procedures (ICD-9CM), CPT, HCPCS & SNOMED-CT:

### 2. Fundamentals of Hospital Administration, CPA &, Health Insurance (Part II)

Hospital Accounting and Financial Accounting, Health Insurance and Billing Design: The Nature and purpose of Accounting, Accounting Concepts & Accounting records, Preparation of various Financial Statements, Fixed assets and Depreciation, Costing and Pricing, Inventory Accounting, Analysis of Financial Statements, Financial Planning and Control, Use of Computers in Accounting, Accounting and Audit Procedures in Health Care Sector, Health Insurance and Third Party Payers

### 3. Medical Transcription, Telemedicine & Healthcare Policies & Standards

Healthcare Policies & Standards: Health Laws, regulations, accreditation standards and certification requirement, Organizational Policy, Auditing methods and techniques, Implementation of ICT system.
Healthcare Information Management, Medical Transcription and Telemedicine:
Healthcare Information standards, Paper based records, Electronic Records, Ethical issues in Health Information management, Clinical quality management, Principal of management and Leadership, Project management, Strategic management, Medical Transcription – basics, objectives, rules, advantages
Telemedicine – Basics, classification, technology, objectives, rules, Telemedicine act, Merits and demerits, Future of Telemedicine, Research.

### 4. Human Resource Management (Part II)

Management and leadership, motivation, team building, communication, productivity, performance appraisal, recruitment, job development, training, performance improvement, and revenue cycle.

5. **(Elective)**
6. **(Elective)**