

## 2. PROGRAM EDUCATION OBJECTIVES (PEOS)

The overall objective of the learning outcome-based curriculum framework (LOCF) for M.Sc. Health Informatics Program are as follows:

PEO No.	Education Objective
PEO 1	Students will be able to use their fundamental concepts and technical competence in health informatics domain as and when required to achieve professional excellence.
PEO 2	Students will have to demonstrate competence in design, development, adoption and application of IT-based innovations in health care services delivery, management and planning and health care data management.
PEO 3	Students will be able to practice the profession with highly professional and ethical attitude, strong communication skills, and effective professional skills to work in a team with multidisciplinary health care team.
PEO 4	Students will be able to use interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related issues in health information systems.
PEO 5	Students will be able to imbibe the culture of research, innovation, entrepreneurship and incubation.
PEO 6	Students will be able to participate in lifelong learning process for a highly productive career and will be able to relate the concepts of digital health and health care IT solutions towards enhancing the healthcare system.



**3. GRADUATE ATTRIBUTES**

S No.	Attribute	Description
1	Professional Knowledge	Acquiring Knowledge of principles of health information management. Knowledge of different dimensions of Digital health domain, learning various tools of health information technology and other related areas of studies
2	Technical / practical skills	Demonstrate Technical / practical skills in order to implement the health care documentation , coding , quality assurance and management plans for quality health care services
3.	Communication	Ability to communicate effectively and appropriately in writing and orally and electronically to patients/clients, care-givers, healthcare professionals and all other stakeholders.
4.	Cooperation/Team work	Ability to work effectively and respectfully with interdisciplinary team members to achieve coordinated, high quality health care for effective clinical documentation.
5.	Professional ethics	Ability to identify ethical issues and apply the ethical values in the professional life
6.	Research / Innovation-related Skills	A sense of inquiry and investigation for raising relevant and contemporary questions, synthesizing and articulating.
7.	Critical thinking and problem solving	Ability to think critically and apply once learning to real-life situations
8.	Reflective thinking	Ability to employ reflective thinking along with the ability to create the sense of awareness of one self and society

S No.	Attribute	Description
9.	Information/digital literacy	Ability to use ICT in a variety of learning situations
10.	Multi-cultural competence	Ability to effectively engage in a multicultural society and interact respectfully
11.	Leadership readiness/qualities	Ability to respond in an autonomous and confident manner to planned and uncertain situations, and should be able to manage themselves and others effectively
12.	Lifelong Learning	Every graduate to be converted into lifelong learner and consistently update himself or herself with current knowledge, skills and technologies. Acquiring Knowledge and creating the understanding in learners that learning will continue throughout life.



### 5. PROGRAM OUTCOMES (POs):

After successful completion of MSc Health Informatics, students will be able to:

PO No.	Attribute	Competency
PO 1	Professional knowledge	Acquire fundamental and scientific knowledge of the interdisciplinary domain of health informatics
PO 2	Clinical/ Technical skills	Demonstrate and possess technical skills in terms of managing health data through its lifecycle ensuring its availability, usability, integrity, and security to meet the needs of data users.
PO 3	Team work	Demonstrate team work skills to support shared goals with the interdisciplinary health care team by applying appropriate analytical techniques, resources, and IT tools.
PO 4	Ethical value & professionalism	Possess and demonstrate ethical values and professionalism and ensure data stewardship (custodianship) through policies and processes for access, management, and permissible uses of data. Demonstrate awareness of ethical principles in the use of health information
PO 5	Communication	Communicate effectively and appropriately with the interdisciplinary health care team for information dissemination and also with the other stakeholders. Enable semantic interoperability between health information technologies
PO 6	Evidence based practice	Demonstrate and apply knowledge of how coded data for diagnoses, procedures and services are used in healthcare including for management, reporting, reimbursement, and research.
PO 7	Life-long learning	Enhance knowledge and skills with the tools to capitalize on information assets and advancing technology for the continual improvement of professional practice of health informatics.
PO 8	Entrepreneurship, leadership and mentorship	Display entrepreneurship, leadership and mentorship skills to practice independently as well as in collaboration with the interdisciplinary health care team

## 6. COURSE STRUCTURE, COURSE WISE LEARNING OBJECTIVE, AND COURSE OUTCOMES (COs)

### SEMESTER - I

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	PR	CR	IAC	ESE	Total
ABS6101	Advanced Biostatistics and Research Methodology	3	1	-	-	4	30	70	100
COM6101	Communication Skills	2		-	-	2	50	50	100
MEL6101	Medical Language	2		-	-	2	100	-	100
MOB6101	Management and Organizational Behaviour	2	1	-	-	3	50	50	100
HIT6101	Fundamentals of Health Informatics	2	1	-	-	3	50	50	100
HIT6102	Public Health Information Management	2	1	-	-	3	50	50	100
HIT ****	Program Elective -I	-	-	6	-	3	50	50	100
<b>Total</b>		<b>13</b>	<b>4</b>	<b>6</b>	<b>-</b>	<b>20</b>	<b>380</b>	<b>320</b>	<b>700</b>

**Note:**  
ESE for ABS6101 will be out of 50 marks & normalized to 70 marks  
ESE for MOB6101, HIT6101 and HIT6102 will be conducted for 100marks

### SEMESTER - II

Course Code	Course Title	Credit Distribution (hours/week)				Marks Distribution		
		L	T	P	CR	IAC	ESE	Total
EPG6201	Ethics and Pedagogy	1	1	-	2	100	-	100
MEL6201	Advanced Medical Language	2	1	-	3	100	-	100
HOA6201	Hospital Administration	2		-	2	50	50	100
QAM6201	Quality Management	2		-	2	50	50	100
HIT6201	Advanced Health Informatics	2	1	-	3	50	50	100
DAT6211	Data Analytics	-	-	4	2	50	50	100
HIT6211	Health Informatics Practicum	-	-	6	3	50	50	100
HIT ****	Program Elective - II	-	-	6	3	50	50	100
<b>Total</b>		<b>9</b>	<b>3</b>	<b>16</b>	<b>20</b>	<b>500</b>	<b>300</b>	<b>800</b>

**Note:**  
ESE for HIT6201 will be conducted for 100 marks



**SEMESTER - III**

Course Code	Course Title	Credit Distribution (hours/week)				Marks Distribution		
		L	T	P	CR	IAC	ESE	Total
REA7101	Recent Advances in Information Management	2		-	2	100	-	100
HCF7101	Healthcare Financing	2	1	-	3	50	50	100
ING7101	Information Governance	2		-	2	50	50	100
HIT7101	Entrepreneurship and Project planning	3		-	3	50	50	100
HIT7102	Managing Health Information System	2	1	-	3	50	50	100
HIT7103	Hospital Profiling	2		-	2	50	50	100
PRM7101	Project Management	2		-	2	100		100
HIM ****	Program Elective-III	-	-	6	3	50	50	100
<b>Total</b>		<b>15</b>	<b>2</b>	<b>6</b>	<b>20</b>	<b>500</b>	<b>300</b>	<b>800</b>

**Note:** ESE for HCF7101 , HIT7101 and HIT7102 will be conducted for 100marks

**SEMESTER - IV**

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	PW	CR	IAC	ESE	Total
HIT7251	Project	-	-	-	45	15	50	50	100
HIT7211	Professional Practice in HIT	-	-	10	-	5	100		100
<b>Total</b>		<b>-</b>	<b>-</b>	<b>10</b>	<b>45</b>	<b>20</b>	<b>150</b>	<b>50</b>	<b>200</b>

**Note:** ESE is conducted for project viva-voce.



### LIST THE PROGRAM ELECTIVE

Student will make a choice of any one of the electives offered in that semester. ESE for practicals will be conducted for 50 marks only

Semester	Elective Code	Elective Title	L	T	P	CR
I	HIT6011	Internet Engineering	-	-	6	3
I	HIT6021	Linux and C programming	-	-	6	3
II	HIT6012	Advance Internet Engineering	-	-	6	3
II	HIT6022	Advance Programming Techniques	-	-	6	3
III	HIT7011	Database Management System	-	-	6	3
III	HIT7021	Mobile application development using android applications	-	-	6	3

### OVERALL CREDIT DISTRIBUTION

Semester	Credit distribution					Marks Distribution		
	L	T	P	PW	CR	IAC	ESE	Total
I - SEMESTER	13	4	6	-	20	380	320	700
II - SEMESTER	9	3	16	-	20	500	300	800
III - SEMESTER	15	2	6	-	20	500	300	800
IV - SEMESTER	-	-	10	45	20	150	50	200
<b>Grand Total</b>	<b>37</b>	<b>9</b>	<b>38</b>	<b>45</b>	<b>80</b>	<b>1530</b>	<b>970</b>	<b>2500</b>

### INTERNAL ASSESSMENT COMPONENT (IAC) WEIGHTAGE DISTRIBUTION

Theory		Practical	
Components	%	Components	%
Mid semester exam	60	Mid semester exam	60
Class seminar	20	Record submission	20
Assignments/Quiz	20	Competency in bench work	20

