

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus for 3 Years B. Sc. (Hons) in Telemedicine and Digital Health

(Effective for Students Admitted in Academic Session 2021-2022)

Aim:

To Create Manpower who will be instrumental in delivering Healthcare facility to remote patients through the Technology of Telemedicine and Digital Health overcoming the barrier of physical distance, cost of treatment and availability of Physicians

PROGRAM EDUCATIONAL OBJECTIVES:

PEO1: Acquire Hands-on Technical Training. Behavioral Training, Strategy and administration:

PEO2: Practice as Product Manager, Human Resources, Operations Manager, Data Analysts, Data Scientists in Government or Private Organizations or Successful Entrepreneurs

PEO3: Acquire excellent communication skills to deal with teammates, stakeholders, and patients in the online space and work both in team and independently

PEO4: Practice Lifelong Learning to overcome problems due to Technological and societal changes with leadership quality.

PROGRAM OUTCOMES

On Completion of the Program, students will be able to:

PO1: Apply knowledge of Mathematics, physics, chemistry, Biology, Computer Science and Information and Communication Technology (ICT) for providing medical service by Physician to Patients at a distant location.

PO2: Analyze complex health and situational problem of patients to provide appropriate Telehealth methodology suitable for both Physician and Patient.

PO3: Design solutions for extending Telemedicine facility to both Urban and Rural Patients

PO4: Use Modern Telemedicine and Digital Health tools for extending service of Physician to Patients.

PO5: Investigate the problems of Telemedicine and Digital Health to provide solutions.

PO6: Assess societal, health, safety, legal and cultural issues and the consequent responsibilities of Healthcare professionals.

PO7: Demonstrate awareness regarding societal and environmental impact of Telemedicine and Digital Healthcare for sustainable implementation.

PO8: Apply ethical principles and commit to professional ethics and responsibilities, and norms and regulations of Telemedicine and Digital Health

PO9: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communicate effectively with Patients, Physicians, Patient parties and other Healthcare related personnel.

PO11: Demonstrate knowledge of management principles and economics as applicable to Telemedicine and Digital Healthcare

PO12: Develop Life Long Learning Skills in the broadest context of Technological and Societal Changes.

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Course Structure

FIRST SEMESTER

Subject Type	Course Code	Subject	Credit Distribution			Credit	Mode of Delivery	Proposed MOOCs			
			L	T	P						
CC	CC1	DHT101	Introduction to Digital Health & Telemedicine			5	1		6	Offline/Blended	As per MAKAUT Notification
	CC2	DHT102	Data capture, visualization and error analysis in healthcare			4			6	Offline/Blended	
		DHT192	Data capture, visualization and error analysis in healthcare (P)					2			
GE	GE1		GE BASKET 1/2/3/4/5			4			4	Offline/Online	
					2	2	2	Offline/Online			
AECC	AECC1	DHT103	English Communication			2			2	Online	
Semester Total Credits									20		

SECOND SEMESTER

Subject Type	Course Code	Subject	Credit Distribution			Credit	Mode of Delivery	Proposed MOOCs			
			L	T	P						
CC	CC3	DHT201	The Human Body as a system: An overview			5	1		6	Offline/Blended	As per MAKAUT Notification
	CC4	DHT202	Human Disease and Diagnosis			4			6	Offline/Blended	
		DHT292	Human Disease and Diagnosis (P)					2		Offline/Blended	
GE	GE2		GE BASKET 1/2/3/4/5			5	1		6	Offline/Online	
AECC	AECC2	DHT203	Impact of Environment on Health			2			2	Online	
Semester Total Credits									20		

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THIRD SEMESTER

Subject Type		Course Code	Subject	Credit Distribution			Credit	Mode of Delivery	Proposed MOOCs
				L	T	P			
CC	CC5	DHT301	Introduction to Clinical Pharmacotherapeutics	4			6	Offline/Blended	As per MAKAUT Notification
		DHT391	Introduction to Clinical Pharmacotherapeutics (P)			2		Offline/Blended	
	CC6	DHT302	Medical Instrumentation and its Applications	4			6	Offline/Blended	
		DHT392	Medical Instrumentation and its Applications(P)			2		Offline/Blended	
	CC7	DHT303	Clinical Terminology Systems and Interoperability	4			6	Offline/Blended	
		DHT393	Clinical Terminology Systems and Interoperability(P)			2		Offline/Blended	
GE	GE3		GE BASKET 1/2/3/4/5	4			4	Offline/Online	
SEC	SEC1	DHT304	Telemedicine Platforms	1		1	2	Online	
Semester Total Credits							26		

FOURTH SEMESTER

Subject Type		Course Code	Subject	Credit Distribution			Credit	Mode of Delivery	Proposed MOOCs
				L	T	P			
CC	CC8	DHT401	Digitalization of Health care delivery Systems	5	1		6	Offline/Blended	As per MAKAUT Notification
	CC9	DHT402	Image Processing and Transmission	4			6	Offline/Blended	
		DHT492	Image Processing and Transmission(P)			2		Offline/Blended	
CC10	DHT403	Health Information Management and Health Informatics	5	1		6	Offline/Blended		
GE	GE4		GE BASKET 1/2/3/4/5	4			4	Offline/Online	
						2	2	Offline/Online	
SEC	SEC2	DHT405	Clinical Applications of Biomedical Signal Processing	1		1	2	Offline/Online	
Semester Total Credits							26		

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FIFTH SEMESTER

Subject Type	Course Code	Subject	Credit Distribution			Credit	Mode of Delivery	Proposed MOOCs		
			L	T	P					
CC	CC11	DHT501	Doctor-Patient Communication			5	1	6	Offline/Blended	As per MAKAUT Notification
	CC12	DHT502	AI and IOT in Healthcare							
		DHT502A	Artificial Intelligence in Healthcare			5	1	6	Offline/Blended	
		DHT502B	Internet of Things							
DSE	DSE1	DHT503	Application of Telemedicine in Health Systems			5	1	6	Offline/Blended	
	DSE2	DHT504	Ethical, Legal and Social Issues of Digital Health			5	1	6	Offline/Online	
Semester Total Credits						24				

SIXTH SEMESTER

Subject Type	Course Code	Subject	Credit Distribution			Credit	Mode of Delivery	Proposed MOOCs			
			L	T	P						
CC	CC13	DHT601	Economics of Digital Health			5	1	6	Offline/Blended	As per MAKAUT Notification	
	CC14	DHT602	Team Dynamics and Change Management for Digital Health Systems			5	1	6	Offline/Blended		
DSE	DSE3	DHT603	Capstone Project			1		5	6		Offline/Online
	DSE4	DHT604	Dissertation / Viva voice			1		5	6		Offline/Online
Semester Total Credits						24					
Grand Total Credits						140					