



Ref: NEHU/BME/2022/ 384

Date: 14/11/2022

Notification for Generic Elective Course (GEC)

This is for your kind information that the Department of Biomedical Engineering, NEHU, Shillong is offering a Generic Elective Course in “**Advances in Healthcare Technology**” (**BM-GEC-504**) for the 1st semester M. Tech students other than Biomedical Engineering students.

Thirty (30) seats are available to this course which will be allotted on first-come-first-serve basis.

All interested students are welcome to apply for the course **on or before 30th November, 2022 by submitting the hardcopy of the application to the department office.**

S. Paul
14/11/22

(Dr. Sudip Paul)

Assistant Professor & Teacher I/C, BME
Department of Biomedical Engineering
North Eastern Hill University, Shillong- 793022

बायोमेडिकल इंजीनियरिंग विभाग
एन.ई.एच.यू., शिलांग-22
Teacher In-Charge
Department of Biomedical Engineering
N.E.H.U., Shillong

Copy to:

1. PA to Vice Chancellor, NEHU, Shillong for information and records please.
2. PA to Registrar, NEHU, Shillong for information and records please.
3. Joint Registrar (Academics) for information and records please.
4. All Deans, NEHU, Shillong with a request to kindly give wide publicity to this information to respective Departments within the schools through your good office.
5. Dean Students Welfare, NEHU, Shillong.
6. All Faculties, Department of Biomedical Engineering, NEHU, Shillong.
7. Web NEHU for publication in the University website.
8. Department file
9. Department notice Board

पूर्वोत्तर पर्वतीय विश्वविद्यालय
जिला: पूर्वी खासी हिल्स, शिलांग - 793022
मेघालय, भारत



North-Eastern Hill University
District: East Khasi Hills, Shillong - 793022
Meghalaya, India

**Application Form for Registration of Students for General Elective
Course in Advance in Healthcare Technology (BM-GEC-504)**

1. Name of the Students in Full :
2. Name of the Department/ centre :
3. Roll No. :
4. NEHU Registration No. :

Signature of Student

Recommended/Not Recommended

Signature of the Head of the Department with seal

.....
For OFFICE USE only

Accepted/ Not Accepted

.....
Signature of HOD Servicing the General Elective Course

.....
Signature & Seal of the Dean of School

Subject Code: BM-GEC-504**3-1-0=4****Subject Name: *Advances in Healthcare Technology*****No. of Hours per Week: 4(Four) hours****Marks Distribution: Sessional Works = 25, End Semester Examination = 75.****Questions to be set: 8 (Eight)****Questions to be answered: Any 5 (five)****Duration of End Semester Examination: 3 (Three) Hours.****UNIT I:**

Advances in Healthcare Technology: Disruption of healthcare and introduction to digital and mobile health, leveraging technology and Innovation to improve patient care, Electronic Medical Records and Hospital Management Strategies for Healthcare IT, opportunities in medical informatics.

Unit II:

Telemedicine in Healthcare: Telemedicine Meets Technology- Remote Presence and Monitoring, Telehealth and Telemedicine Business Model, advances in telemetry technology and standards, privacy and security issues in remote healthcare monitoring

Unit III:

Innovative Medical Technologies: Innovation in Drug Delivery Technology, Design and development of healthcare technologies, Analytical Approaches for Optimising Healthcare Ecosystem, Personalized Genomics, Redefining pharmaceutical R&D and introduction to adaptive clinical trial design, Next generation sequencing.

UNIT IV:

Social Diagnostics in Healthcare: Medical devices: development and clinical applications, Companion Diagnostics and Outlook for personalized medicine, social network platform to achieve better health outcomes, Core technology opportunities, Smarter healthcare models, future of healthcare.

Text Books:

1. R.S. Khandpur, Telemedicine: Technologies and Applications, PHI Learning Pvt. Limited, Delhi, 2020
2. Sudip Paul and Dinesh Bhatia, Smart healthcare for disease diagnosis and prevention, Elsevier Publisher, 2020
3. Dinesh Bhatia, Medical Informatics, PHI Learning Pvt. Limited, Delhi, 2015
4. Dinesh Bhatia, Prabhat Chaudhari, Bhupinder Chaudhary, Sushman Sharma, Kunal Dhingra A guide to hospital administration and planning, Springer, 2022

Reference Books:

1. S. Rajasekaran, G. A. Vijayalakshmpai, Neural Networks, Fuzzy Logic and Genetic Algorithm, PHI learning pvt. 2003.
2. Huff and Finholt, "Social Issues in Computing: Putting Computing in Place", McGraw Hill, 1994.
3. Christine Guzzo Vickery, Gary Nyberg, and Douglas Whiteaker, Modern Clinic Design: Strategies for an Era of Change, Wiley, 2015.
4. Dinesh Bhatia, Modern Technological Intervention Advancements for the Physically Challenged and Disabled Population, Cambridge Scholars Publishing, U.K., 2021.