

**NORTH-EASTERN HILL UNIVERSITY**  
**DEPARTMENT OF BIOMEDICAL ENGINEERING**  
**SHILLONG-793022, MEGHALAYA**

F.No.:- NEHU/BME/LEET-2021/04

20-09-2021

**B. Tech Biomedical Engineering (BME) Lateral Entry Entrance Examination-2021**

The admission/selection to the B.Tech (BME) lateral entry 2021 program for a limited number seats in the 2nd year (3<sup>rd</sup> semester) will be done on the basis of an **ONLINE WRITTEN TEST** of an hour duration (total marks 120).

The decision of the Admission Committee in all matters shall be binding as final. Tentative Date and time of the online written test for those candidates whose offline form reached to department as per notified time, are furnished follows:

<b>Lateral Entry selection process</b>	1. Selection shall be done through Written Entrance Examination. 2. Total marks for the exam will be 120. Total question- 30 Nos. 3. Subjects for the Entrance Examination are as follows:- <b>1. Basic of Medical Instrumentation</b> <b>2. Basic Human Anatomy &amp; Physiology</b> <b>3. Basic Medical Electronics</b> <b>4. Basic Biomaterials</b> <b>5. Basic Engineering Mechanics</b> Question paper is objective type with no negative marking. (Duration of the examination shall be 30 minutes)
<b>Tentative Important dates for B. Tech(BME) Lateral Entry 2021</b>	1. <b>Publication of valid applicants list</b> : 21 <sup>st</sup> Sept 2021 2. <b>Date of Lateral Entry Entrance Examination (online):</b> 27 <sup>th</sup> Sept 2021 <i>(Reporting Time: 10:30 AM online through google meet)</i> 3. <b>Publication of Merit List</b> : On or before 29 <sup>th</sup> Sept 2021 4. <b>Date of Admission</b> : 30 <sup>th</sup> Sept 2021
<b>Venue: The test will be conducted online using Google forms from 11:00AM-12:00 NOON tentatively on 27<sup>th</sup> Sept 2021</b>	

**Note:-**

1. All dates mentioned above are tentative may be change due to Covid-19 pandemic. Candidates will be informed in advance for any correction or change in dates.
2. In case, any candidate fails to report at the reporting time and venue on the specified date and time mentioned above, he/she will forfeit his/her candidature. Furthermore, if selected, the candidate has to take admission within the time frame or else his/her claim against the seat will be invalidated.
3. For any communication kindly mail to [bmeleet2020@gmail.com](mailto:bmeleet2020@gmail.com)

You are further informed to upload (link will be provided on your registered email ID) the following documents for verification failing which your selection for entrance test and interview will stand cancelled:

1. Pass certificate of Degree/ Diploma in relevant discipline.
2. Pass certificates of all board/council examinations starting from HSLC or equivalent
3. Mark sheets/grade cards of all board/council examinations starting from HSLC or equivalent.
4. Valid certificate for SC/ST issued by Deputy Commissioner (DC) or competent authority under the seal of DC's office only.
5. Employment certificate issued from Registrar's Office, NEHU (for NEHU Ward cases only).
6. Valid certificate for Person with Disability (PH Category Candidates).
7. Permanent Resident Certificate for those who are claiming the permanent resident of Meghalaya.
8. Date of Birth Certificate or HSLC certificate.
9. Affidavit on stamp paper stating that the information provided by me with is correct and if found incorrect then my candidature for admission in B.Tech.(BME) lateral entry 2021 stand cancelled
10. All legal action is taken from Meghalaya jurisdiction.

Sd/  
Convener  
Admission Committee Lateral Entry  
Department of Biomedical Engineering

**NORTH EASTERN HILL UNIVERSITY, SHILLONG-793022 MEGHALAYA  
DEPARTMENT OF BIOMEDICAL ENGINEERING**

**The detailed syllabus of Written Test for B.Tech (BME) Lateral Entry Entrance Examination 2019**

S.No.	Subjects	Syllabus
1	Basic of Medical Instrumentation	Bioelectric Amplifiers, Biomedical Transducers and Bio electrodes, Patient Monitoring System, Analytical and Diagnostic Instruments, Cardiac Pacemakers and Defibrillators, Ventilators and Anesthesia System, Physiotherapy Equipment's, Therapeutic Equipment:
2	Basic Human Anatomy & Physiology	Structure and function of Cell, Cardiovascular, Respiratory, Nervous Systems, Sense Organs, Alimentary, Excretory Systems, Endocrine and Reproductive Systems, Metabolism, Biochemistry basic and Microbiology.
3	Basic Medical Electronics	Semiconductor Materials, chemical and physical bonds, Intrinsic and extrinsic semiconductors, carrier motion in semiconductors – Drift, Diffusion And Recombination – Generation process, Boltzmann Transport equation, P-N junction diode, Bipolar Junction Transistor (BJT), Field Effect Transistor (FET), Operational Amplifier(OPAMP). Signal generator and filters; Metal - Oxide - Semiconductor (MOS): MOS Structure, Modes of operation, Metal Oxide Semiconductor Field effect Transistor (MOSFET) with applications in BME. Electrolyte – Insulator – Semiconductor (EIS): EIS Structure, Site binding Theory, Electrical double layer theory. Biosensors and bio-amplifiers
4	Basic Biomaterials	Basic of biomaterials, Metallic implant materials, Ceramic and Composite implant materials, Biocompatibility and toxicological screening of biomaterials as well as Testing of biomaterials/Implants
5	Basic Engineering Mechanics	Basic of Mechanics, Newton's laws of Motion, Lever system Force Systems, Friction, Kinematics and Rigid Body Dynamics

Sd/  
Chairman  
Admission Committee Lateral Entry  
Department of Biomedical Engineering