

**Maulana Abul Kalam Azad University of Technology, WB**  
**(Formerly known as West Bengal University of Technology)**  
**Syllabus of B.Sc. in Medical Instrumentation & Critical Care Technology**  
**Effective from academic session 2023-24**

**Graduate Attributes**

**By the end of the program the students will be able to:**

- To help healthcare professionals comprehend issues related to providing critical care to patients requiring the same along with having a full proof knowledge on maintenance of various biomedical instruments required for conducting medical tests and other related ailments.
- The course also aims to comprehend Healthcare organizations.
- The students can work in conjunction with other healthcare organizations.
- Work in hospitals (both private and public sectors) as a healthcare professional.
- A BSc in Critical Care Technology can easily get placed in hospitals.
- He/she can work in hospitals in ICUs, emergency rooms, trauma centers, and similar healthcare settings requiring emergency and critical care.
- Hospitals working in both the private and public sectors will be in need of the services.
- After successful completion of a B.Sc. in Critical Care Technology, students are eligible to work in the Critical Care Unit, Cardiac Unit, Operation Theatre, etc in hospitals and other health care units.
- The students would be able to learn about setting up medical equipment, monitoring the equipment, recording the data, and providing the data to the physicians.
- students will have a basic understanding of the scientific principles on which medical instruments and devices are designed for healthcare applications.

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**Curriculum Structure**

**Semester 1**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	DSC	BMICCT 101 & 191	BASICS OF HUMAN ANATOMY	3	0	2	5
2.		BMICCT 102 & 192	BASICS OF HUMAN PHYSIOLOGY	3	0	2	5
3.	DSE	MIM101	PRINCIPLES OF MANAGEMENT	2	1	0	3
4.	GE		ANYONE FROM GE BASKET A/D	3	0	0	3
5.	AECC	AECC101	ENGLISH & PROFESSIONAL COMMUNICATION	2	0	0	2
6.	SEC	SEC181	LIFE SKILLS & PERSONALITY DEVELOPMENT	2	0	0	2
7.	VAC	VAC181A/B/C	YOGA/HEALTH & WELLNESS/SPORTS	2	0	0	2
<b>Total Credit</b>							22

**Semester 2**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	DSC	BMICCT 201	BASIC CRITICAL CARE MANAGEMENT [BASICS OF NURSING, ANAESTHESIA, SURGERY]	3	2	0	5
2.		BMICCT 202 & 292	FUNDAMENTALS OF BIOCHEMISTRY	3	0	2	5
3.	DSE	MIM201A/B	ORGANIZATION BEHAVIOUR /BUSINESS ETHICS & CORPORATE GOVERNANCE	2	1	0	3
4.	GE		ANYONE FROM GE BASKET B/E	3	0	0	3
5.	AECC	AECC201	Modern Indian Languages & Literature	2	0	0	2
6.	SEC	SEC201	IT Skills	2	0	0	2
7.	VAC	VAC281A/B/C/D	CRITICAL THINKING/NSS /MENTAL HEALTH/ENVIRONMENTAL STUDIES	2	0	0	2
<b>Total Credit</b>							22

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**Semester 3**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	<b>DSC</b>	BMICCT 301 & 391	BASICS OF PATHOLOGY, MICROBIOLOGY, PHARMACOLOGY	3	-	2	5
2.		BMICCT 302	FUNDAMENTALS OF BIO-PHYSICS	3	2	0	5
3.	<b>DSE</b>	MIM301	Principles of Marketing	3	1	0	4
4.	<b>GE</b>		GE- Anyone from the GE Basket	3	-	0	3
5.	<b>AECC</b>	AECC 301	The Constitution, Human Rights & Law	2		0	2
6.	<b>SEC</b>	SEC 301	Understanding & Connecting with Environment	2		0	2
<b>Total Credit</b>							21

**Semester 4**

Subject Type	Code	Subject Name	Credits			Total Credits
			L	T	P	
<b>DSC</b>	BMICCT 401	ICU THERAPY	3	1	0	4
	BMICCT 402	CSSD PROCEDURE	3	1	0	4
	BMICCT 403 & 493	LABORATORY SCIENCE [HAEMATOLOGY & PARASITOLOGY]	3	0	2	5
<b>DSE</b>	MIM401	Human Resource Management	4	-	0	4
	MIM402	E-Commerce	4	-	0	4
<b>AECC</b>	AECC 401	Society, Culture & Human Behaviour	2	-	0	2
<b>Total Credit</b>						<b>23</b>

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**Semester 5**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	DSC	BMICCT 501	EQUIPMENT MAINTENANCE & TROUBLE SHOOTING	3	-	2	5
2.		BMICCT 502	LAW & MEDICAL ETHICS	3	-	2	5
3.	DSE	MIM501	Financial Management	4	-	0	4
		MIM502	Entrepreneurship	4	-	0	4
5.	SEC	SEC581	Internship	4	-	0	4
<b>Total Credit</b>							22

**Semester 6**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	DSC	BMICCT 601	RESEARCH METHODOLOGY - I	3	1	0	4
2.		BMICCT 602	CELLULAR BIOPHYSICS	3	2	0	5
3.		BMICCT 603 & 693	BIOCHEMICAL TECHNIQUE	3	0	2	5
4.	DSE	MIM601	Customer relationship management	4	-	0	4
5.		MIM602	Career planning and management	4	-	0	4
<b>Total Credit</b>							22

**Semester 7**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	DSC	BMICCT 701	OPHTHALMOLOGY & ENT	3	2	0	5
2.		BMICCT 702	COMMUNITY HEALTH & EVS	3	2	0	5
3.		BMICCT 703	RESEARCH METHODOLOGY - II	3	1		4
4.	DSE	MIM701	Consumer Behavior	4	-	0	4
5.		MIM702	Strategic Management	4	-	0	4
<b>Total Credit</b>							22

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**Semester 8**

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	<b>DSC</b>	BMICCT 801	GYNAECOLOGY & OBSTETRICS	3	2	0	5
2.		BMICCT 802	CLINICAL MANIFESTATION OF PEDIATRICS	3	2	0	5
3.	<b>SEC</b>	SEC881	Research Project	12	-	-	12
<b>Total Credit</b>							22