



# Indian Institute of Information Technology - Allahabad

Deoghat, Jhalwa- 211015, Prayagraj, Uttar Pradesh

Department of Applied Sciences

## Proposed **Minor** courses for B. Tech IT/ECE

### (A) Minor in **Biological Data Analytics** Course Curriculum

Sl. No.	Course Name	Semester	Credit	L-T-P
1.	Proteomics and Genomics		3	3-0-0
2.	Next Generation Sequencing		3	3-0-0
3.	Cheminformatics for Engineers		3	3-0-0
4.	Systems Biology and Modeling		3	3-0-0
5.	Molecular Structure Prediction		3	3-0-0
<b>Total Credits</b>			<b>15</b>	

### (B) Minor in **Medical Diagnostics and Therapeutic Technology** Curriculum

Sl. No.	Course Name	Semester	Credit	L-T-P
1.	Basics of Human Anatomy & Physiology		3	3-0-0
2.	Biomedical Instrumentation		3	3-0-0
3.	Bio-MEMs and Nanotechnology		3	3-0-0
4.	Medical Imaging		3	3-0-0
5.	Tissue engineering and Gene therapy		3	3-0-0
<b>Total Credits</b>			<b>15</b>	



# Indian Institute of Information Technology - Allahabad

Deoghat, Jhalwa- 211015, Prayagraj, Uttar Pradesh

Department of Applied Sciences

## (C) Minor in Quantum Computation and Quantum Information Course Curriculum

Sl. No.	Course Name	Lab requirement	Credit	L-T-P
1.	Fundamentals of Quantum Computation		3	3-0-0
2.	Information Theory and Entropy		3	3-0-0
3.	Spintronics		3	3-0-0
4.	Quantum Cryptography		3	3-0-0
5.	Functional Quantum Materials		3	3-0-0
Total Credits			15	

## List of Open Electives (tentative) for IT/ECE (B. Tech)

Sl. No.	Course Name	Semester	Credit	L-T-P
1.	Tomography Imaging		3	3-0-0
2.	Bioinformatics		3	3-0-0
3.	Introduction to quantum computing and Information		3	3-0-0
4.	Advanced quantum computing and Information		3	3-0-0
5.	System modeling and simulation		3	2-0-1
6.	Nonlinear dynamics		3	3-0-0
7.	Solid State Physics -I		3	3-0-0
8.	Solid State Physics -II		3	2-0-1
9.	Spintronic and Magnetic Materials		3	3-0-0
10.	Photonic Crystals and Metamaterials		3	3-0-0



# Indian Institute of Information Technology - Allahabad

Deoghat, Jhalwa- 211015, Prayagraj, Uttar Pradesh

## Department of Applied Sciences

11.	Algebra and Number Theory		3	3-0-0
12.	Introduction to Topology		3	3-0-0
13.	Real Analysis		3	3-0-0
14.	Numerical Analysis		3	3-0-0

