

INDIAN INSTITUTE OF INFORMATION  
TECHNOLOGY-ALLAHABAD

# CURRICULUM BROCHURE

Curricula of courses running since the academic year 2015-16



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# 1. Introduction

Curriculum Brochure is a one point reference for Course Structure of all the Bachelors' and Masters' programmes running in Academic year since 2015-16. In tabular form it presents semester-wise details of all the relevant subjects including type of course (Core/Elective/Project), theory, lab or project credits for every semester, along with course codes. The 8-character notation for course codes is to be understood with the following notation:

Notation: DCORSXYT

1. **D** - Department offering the course.

- (a) **E** - ECE
- (b) **I** - IT
- (c) **M** - Management
- (d) **S** - Applied Science

2. **COR** - Course

3. **S** - Semester of the *concerned student*

- (a) Semester number if numeric
- (b) Semester 10 if **X**
- (c) Project semester between semesters 6 and 7 for Dual Degree programme if **I**
- (d) Project semester between semesters 8 and 9 for Dual Degree programme if **J**

4. **XY** - Number of credits. A theory credit denotes 1 hour of lecture per week and one practical credit denotes 1.5 hours of laboratory work per week.

5. **T** - Type of course

- (a) **C** - Core
- (b) **E** - Elective
- (c) **F** - Flexible
- (d) **P** - Project

Example: **IAIN532C** is a course that is offered by IT Department (**I**) called 'Artificial Intelligence' (**AIN**) which is floated in semester **5** with **3** theory credits and **2** practical credits as a core course (**C**).

## 2. Undergraduate Programmes

This chapter has information regarding curricula of all the Undergraduate Programmes running in IIIT-Allahabad.

### 2.1 B.Tech (IT)

Bachelors of Technology in Information Technology is a 4-year programme. The curricula of various batches are as follows:

#### 2.1.1 B.Tech (IT): 2016-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
EEDC132C	Electronics Devices and Circuits	C	3	2	-
IIPG132C	Introduction to Programming	C	3	2	-
SCDE130C	Calculus and Differential Equation	C	3	0	-
SEGP132C	Engineering Physics	C	3	2	-
ECAS130C	Circuit Analysis and Synthesis	C	3	0	-
IITC102C	Introduction to Computers	C	0	2	-
MPCN102C	Professional Communication	C	0	2	-
<b>SEMESTER - 2</b>					
SPAS230C	Probability and Statistics	C	3	0	SCDE130C
IDMA230C	Discrete Mathematics	C	3	0	-
ICOA230C	Computer Organization and Architecture	C	3	0	IITC102C
IDST232C	Data Structures	C	3	2	IIPG132C
EDES232C	Digital Electronics	C	3	2	-
MPOM230C	Principles of Management	C	3	0	-
<b>SEMESTER - 3</b>					
SMAT330C	Mathematics - 2	C	3	0	SCDE130C
IOPS332C	Operating System	C	3	2	ICOA230C
ITOC330C	Theory of Computation	C	3	0	IDMA230C
I00M332C	Object Oriented Methodologies	C	3	2	IDST232C
EMIP332C	Microprocessors	C	3	2	EDES232C
<b>SEMESTER - 4</b>					
SMAT430C	Mathematics - 3	C	3	0	SMAT330C
IDAA432C	Design and Analysis of Algorithms	C	3	2	IDST232C IDMA230C
IPPL430C	Principles of Programming Languages	C	3	0	IDST232C
IDBM432C	Database Management Systems	C	3	2	IDST232C IDMA230C
EPC0432C	Principles of Communication	C	3	2	-
<b>SEMESTER - 5</b>					
ICNE532C	Computer Networks	C	3	2	EPC0432C

ISOE532C	Software Engineering	C	3	2	I00M332C
IAIN532C	Artificial Intelligence	C	3	2	IDAA432C
IGVC532C	Graphics and Visual Computing	C	3	2	IDST232C
MPOE530C	Principles of Economics	C	3	0	-
IPRJ505P	Mini Project	P	0	5	-
<b>SEMESTER - 6</b>					
ICOD632C	Compiler Design	C	3	2	ITOC330C IITG132C
IIVP632C	Image and Video Processing	C	3	2	IITG132C
IDMW632C	Data Mining and Warehousing	C	3	2	IDBM432C
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
IPRJ605P	Mini Project	P	0	5	-
<b>SEMESTER - 7</b>					
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
IPRJ708P	Mini Project	P	0	8	-
<b>SEMESTER - 8</b>					
IPHS820C	Philosophy of Science	C	2	0	-
	Elective - 5 <sup>1</sup>	E	3	0	-
IPRJ814P	Major Project	P	0	14	IPRJ505P IPRJ605P IPRJ708P
<b>ELECTIVES</b>					
IOPT630E	Optimization Techniques	E	3	0	-
ECSE630E	Control System Engineering	E	3	0	-
INLP630E	Natural Language Processing	E	3	0	-
ISC0630E	Soft Computing	E	3	0	-
IMCL630E	Machine Learning - Tools and Techniques	E	3	0	-
IRIA630E	Robotics and Industrial Automation	E	3	0	-
INSE630E	Network Security	E	3	0	-
ICVI630E	Computer Vision	E	3	0	-
IIMP630E	Image Processing	E	3	0	-
IPAC630E	Parallel Computing	E	3	0	-
IWSN630E	Wireless Sensor Networks	E	3	0	-
IIRS730E	Information Retrieval System	E	3	0	-
ICIS730E	Cryptography and Information Security	E	3	0	-
IMDM730E	Mobile Data Management	E	3	0	-
ISLT730E	Speech and Language Technologies	E	3	0	-
ERSC730E	Radar and Satellite Communication	E	3	0	-
IHUR730E	Humanoid Robotics	E	3	0	-
ICCS730E	Cognition and Cognitive Process Modeling	E	3	0	-
IEC0730E	Data Compression	E	3	0	-
IMOC730E	Mobile Computing	E	3	0	-
IEMB730E	Modeling Design and Analysis of Embedded System	E	3	0	-
IIVP730E	Internet Protocols	E	3	0	-
IIVR730E	Virtual Reality	E	3	0	-
SBNF730E	Bioinformatics	E	3	0	-
IMSE730E	Mobile Software Engineering	E	3	0	-

Table 2.1: Curriculum of B.Tech (IT): 2016-20

<sup>1</sup>Elective from the 6th semester basket

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. Elective baskets may be created as per requirement of the time table/specialization.
3. Pools of electives may be common for sixth and eighth semesters.
4. More electives may be offered based on the availability of faculty.

## 2.1.2 B.Tech (IT): 2015-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
EEDC132C	Electronics Devices and Circuits	C	3	2	-
IIPG132C	Introduction to Programming	C	3	2	-
SCDE130C	Calculus and Differential Equation	C	3	0	-
SEGP132C	Engineering Physics	C	3	2	-
ECAS130C	Circuit Analysis and Synthesis	C	3	0	-
IITC102C	Introduction to Computers	C	0	2	-
MPCN102C	Professional Communication	C	0	2	-
<b>SEMESTER - 2</b>					
SPAS230C	Probability and Statistics	C	3	0	SCDE130C
IDMA230C	Discrete Mathematics	C	3	0	-
ICOA230C	Computer Organization and Architecture	C	3	0	IITC102C
IDST232C	Data Structures	C	3	2	IIPG132C
EDES232C	Digital Electronics	C	3	2	-
MPOM230C	Principles of Management	C	3	0	-
<b>SEMESTER - 3</b>					
SMAT330C	Mathematics - 2	C	3	0	SCDE130C
IOPS332C	Operating System	C	3	2	ICOA230C
ITOC330C	Theory of Computation	C	3	0	IDMA230C
I00M332C	Object Oriented Methodologies	C	3	2	IDST232C
EMIP332C	Microprocessors	C	3	2	EDES232C
<b>SEMESTER - 4</b>					
SMAT430C	Mathematics - 3	C	3	0	SMAT330C
IDAA432C	Design and Analysis of Algorithms	C	3	2	IDST232C IDMA230C
IPPL430C	Principles of Programming Languages	C	3	0	IDST232C
IDBM432C	Database Management Systems	C	3	2	IDST232C IDMA230C
EPC0432C	Principles of Communication	C	3	2	-
<b>SEMESTER - 5</b>					
ICNE532C	Computer Networks	C	3	2	EPC0432C
ISOE532C	Software Engineering	C	3	2	I00M332C
IAIN532C	Artificial Intelligence	C	3	2	IDAA432C
IGVC532C	Graphics and Visual Computing	C	3	2	IDST232C
MPOE530C	Principles of Economics	C	3	0	-
IPRJ505P	Mini Project	P	0	5	-
<b>SEMESTER - 6</b>					
ICOD632C	Compiler Design	C	3	2	ITOC330C IITG132C
IIVP632C	Image and Video Processing	C	3	2	IITG132C
IDMW632C	Data Mining and Warehousing	C	3	2	IDBM432C
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
IPRJ605P	Mini Project	P	0	5	-



	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
IPRJ708P	Mini Project	P	0	8	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
	Elective - 5 <sup>2</sup>	E	3	0	-
IPRJ814P	Major Project	P	0	14	IPRJ505P IPRJ605P IPRJ708P
	<b>ELECTIVES</b>				
IOPT630E	Optimization Techniques	E	3	0	-
ECSE630E	Control System Engineering	E	3	0	-
INLP630E	Natural Language Processing	E	3	0	-
ISC0630E	Soft Computing	E	3	0	-
IMCL630E	Machine Learning - Tools and Techniques	E	3	0	-
IRIA630E	Robotics and Industrial Automation	E	3	0	-
INSE630E	Network Security	E	3	0	-
ICVI630E	Computer Vision	E	3	0	-
IIMP630E	Image Processing	E	3	0	-
IPAC630E	Parallel Computing	E	3	0	-
IWSN630E	Wireless Sensor Networks	E	3	0	-
IIRS730E	Information Retrieval System	E	3	0	-
ICIS730E	Cryptography and Information Security	E	3	0	-
IMDM730E	Mobile Data Management	E	3	0	-
ISLT730E	Speech and Language Technologies	E	3	0	-
ERSC730E	Radar and Satellite Communication	E	3	0	-
IHUR730E	Humanoid Robotics	E	3	0	-
ICCS730E	Cognition and Cognitive Process Modeling	E	3	0	-
IEC0730E	Data Compression	E	3	0	-
IMOC730E	Mobile Computing	E	3	0	-
IEMB730E	Modeling Design and Analysis of Embedded System	E	3	0	-
IIWP730E	Internet Protocols	E	3	0	-
IIVR730E	Virtual Reality	E	3	0	-
SBNF730E	Bioinformatics	E	3	0	-
IMSE730E	Mobile Software Engineering	E	3	0	-

Table 2.2: Curriculum of B.Tech (IT): 2015-19

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. Elective baskets may be created as per requirement of the time table/specialization.
3. Pools of electives may be common for sixth and eighth semesters.
4. More electives may be offered based on the availability of faculty.

### 2.1.3 B.Tech (IT): 2014-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
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<sup>2</sup>Elective from the 6th semester basket

	<b>SEMESTER - 1</b>				
EEDC132C	Electronic Devices and Circuits	C	3	2	-
ECAS130C	Circuit Analysis and Synthesis	C	3	0	-
SPHY132C	Physics - I	C	3	2	-
SMAT130C	Mathematics - I	C	3	0	-
IITP132C	Introduction to Programming	C	3	2	-
MLCS102C	Communication Skill Lab	C	0	2	-
IICL102C	Introduction to Computer Lab	C	0	2	-
	<b>SEMESTER - 2</b>				
IDSA232C	Data Structures and Algorithms	C	3	2	-
EDEL232C	Digital Electronics	C	3	2	-
SMAT232C	Mathematics - II	C	3	2	-
ICOA230C	Computer Organization and Architecture	C	3	0	-
IDIM230C	Discrete Mathematics	C	3	0	-
MPOM230C	Principles of Management	C	3	0	-
	<b>SEMESTER - 3</b>				
IOPS332C	Operating System	C	3	2	-
EMIP332C	Microprocessors	C	3	2	-
SMAT330C	Mathematics - III	C	3	0	-
ITOC330C	Theory of Computation	C	3	0	-
I00M332C	Object Oriented Methodologies	C	3	2	-
	<b>SEMESTER - 4</b>				
SPAS430C	Probability and Statistics	C	3	0	-
EPOC432C	Principles of Communications	C	3	2	-
IDAA432C	Design and Analysis of Algorithms	C	3	2	-
IDBM432C	Data Base Management System	C	3	2	-
IPPL430C	Principles of Programming Languages	C	3	0	-
	<b>SEMESTER - 5</b>				
ICNE532C	Computer Networks	C	3	2	EPOC432C
ISOE532C	Software Engineering	C	3	2	-
IAIN532C	Artificial Intelligence	C	3	2	IDAA432C
IGVC532C	Graphics and Visual Computing	C	3	2	IDSA232C
MPOE530C	Principles of Economics	C	3	0	-
IPRJ505P	Mini Project	P	0	5	-
	<b>SEMESTER - 6</b>				
ICOD632C	Compiler Design	C	3	2	ITOC330C
IIVP632C	Image and Video Processing	C	3	2	-
IDMW632C	Data Mining and Warehousing	C	3	2	IDBM432C
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
IPRJ605P	Mini Project	P	0	5	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS430C
MORB720C	Organizational Behaviour	C	2	0	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
IPRJ708P	Mini Project	P	0	8	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-

IPRJ814P	Elective - 5 <sup>3</sup> Major Project	E P	3 0	0 14	- IPRJ505P IPRJ605P IPRJ708P
<b>ELECTIVES</b>					
IOPT630E	Optimization Techniques	E	3	0	-
ECSE630E	Control System Engineering	E	3	0	-
INLP630E	Natural Language Processing	E	3	0	-
ISCO630E	Soft Computing	E	3	0	-
IMCL630E	Machine Learning - Tools and Techniques	E	3	0	-
IRIA630E	Robotics and Industrial Automation	E	3	0	-
INSE630E	Network Security	E	3	0	-
ICVI630E	Computer Vision	E	3	0	-
IIMP630E	Image Processing	E	3	0	-
IPAC630E	Parallel Computing	E	3	0	-
IWSN630E	Wireless Sensor Networks	E	3	0	-
IIRS730E	Information Retrieval System	E	3	0	-
ICIS730E	Cryptography and Information Security	E	3	0	-
IMDM730E	Mobile Data Management	E	3	0	-
ISLT730E	Speech and Language Technologies	E	3	0	-
ERSC730E	Radar and Satellite Communication	E	3	0	-
IHUR730E	Humanoid Robotics	E	3	0	-
ICCS730E	Cognition and Cognitive Process Modeling	E	3	0	-
IECO730E	Data Compression	E	3	0	-
IMOC730E	Mobile Computing	E	3	0	-
IEMB730E	Modeling Design and Analysis of Embedded System	E	3	0	-
IIWP730E	Internet Protocols	E	3	0	-
IIVR730E	Virtual Reality	E	3	0	-
SBNF730E	Bioinformatics	E	3	0	-
IMSE730E	Mobile Software Engineering	E	3	0	-

Table 2.3: Curriculum of B.Tech (IT): 2014-18

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. Elective baskets may be created as per requirement of the time table/specialization.
3. Pools of electives may be common for sixth and eighth semesters.
4. More electives may be offered based on the availability of faculty.

#### 2.1.4 B.Tech (IT): 2013-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IITP132C	Introduction to Programming	C	3	2	-
EBEL130C	Basic Electronics	C	3	0	-
SPHY132C	Physics	C	3	2	-
SMAT130C	Mathematics - I	C	3	0	-
IEVE130C	Environmental Engineering	C	3	0	-
IITC102C	Introduction to Computers	C	0	2	-
EEWS102C	Electronic Workshop	C	0	2	-
<b>SEMESTER - 2</b>					
IDST232C	Data Structures	C	3	2	-

<sup>3</sup>Elective from the 6th semester basket

EDEL232C	Digital Electronics	C	3	2	-
SMAT232C	Mathematics - II	C	3	2	-
ICOA230C	Computer Organization and Architecture	C	3	0	-
IDIM230C	Discrete Mathematics	C	3	0	-
MCST220C	Communication Skills and Technical Writing	C	2	0	-
<b>SEMESTER - 3</b>					
SMAT330C	Mathematics III	C	3	0	-
IOSY332C	Operating Systems	C	3	2	-
EMPR332C	Microprocessor Programming	C	3	2	-
I00M332C	Object Oriented Methodology	C	3	2	-
MPOM330C	Principles of Management	C	3	0	-
ITOC330C	Theory of Computation	C	3	0	-
<b>SEMESTER - 4</b>					
IDBM432C	Data Base Management System	C	3	2	-
IPPL430C	Principles of Programming Languages	C	3	0	-
EDCE432C	Digital Communication Engineering	C	3	2	-
IDAA432C	Design and Analysis of Algorithms	C	3	2	-
SPST432C	Probability and Statistics	C	3	2	-
<b>SEMESTER - 5</b>					
ISWE532C	Software Engineering	C	3	2	-
IAIN532C	Artificial Intelligence	C	3	2	-
IGVC532C	Computer Graphics	C	3	2	-
MPOE530C	Principles of Economics	C	3	0	-
ICNW532C	Computer Networks	C	3	2	-
IPRJ505P	Mini Project	C	0	5	-
<b>SEMESTER - 6</b>					
ICOD632C	Compiler Design	C	3	2	-
IIVP632C	Image and Vision Processing	C	3	2	-
IDMW632C	Data Mining and Warehousing	C	3	2	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
IPRJ605P	Mini Project	P	0	5	-
<b>SEMESTER - 7</b>					
ISIM732C	System Modeling and Simulation	C	3	2	SPST432C
MORB720C	Organizational Behaviour	C	2	0	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
IPRJ708P	Mini Project	P	0	8	-
<b>SEMESTER - 8</b>					
IPHS820C	Philosophy of Science	C	2	0	-
	Elective - 5 <sup>4</sup>	E	3	0	-
IPRJ814P	Major Project	P	0	14	IPRJ505P IPRJ605P IPRJ708P
<b>ELECTIVES</b>					
IOPT630E	Optimization Techniques	E	3	0	-
ECSE630E	Control System Engineering	E	3	0	-
INLP630E	Natural Language Processing	E	3	0	-
ISCO630E	Soft Computing	E	3	0	-
IMCL630E	Machine Learning - Tools and Techniques	E	3	0	-
IRIA630E	Robotics and Industrial Automation	E	3	0	-

<sup>4</sup>Elective from the 6th semester basket

INSE630E	Network Security	E	3	0	-
ICVI630E	Computer Vision	E	3	0	-
IIMP630E	Image Processing	E	3	0	-
IWSN630E	Wireless Sensor Networks	E	3	0	-
IPC0630E	Parallel Computing	E	3	0	-
IIRS730E	Information Retrieval System	E	3	0	-
ICIS730E	Cryptography and Information Security	E	3	0	-
IMDM730E	Mobile Data Management	E	3	0	-
ISLT730E	Speech and Language Technologies	E	3	0	-
IRSC730E	Radar and Satellite Communication	E	3	0	-
IHUR730E	Humanoid Robotics	E	3	0	-
ICCS730E	Cognition and Cognitive Process Modeling	E	3	0	-
IDC0730E	Data Compression	E	3	0	-
IMOC730E	Mobile Computing	E	3	0	-
IEMB730E	Modeling Design and Analysis of Embedded System	E	3	0	-
IIWP730E	Internet Protocols	E	3	0	-
IVIR730E	Virtual Reality	E	3	0	-
SBNF730E	Bio Informatics	E	3	0	-
IMSE730E	Mobile Software Engineering	E	3	0	-
IDBS730E	Database Security	E	3	0	-

Table 2.4: Curriculum of B.Tech (IT): 2013-17

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. Elective baskets may be created as per requirement of the time table/specialization.
3. Pools of electives may be common for sixth and eighth semesters.
4. More electives may be offered based on the availability of faculty.

### 2.1.5 B.Tech (IT): 2012-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IITP133C	Introduction to Programming	C	3	3	-
EEDC132C	Electronic Devices and Circuits	C	3	2	-
SPHY132C	Physics - I	C	3	2	-
SMAT130C	Mathematics - I	C	3	0	-
IEVE130C	Environmental Engineering	C	3	0	-
MLCS102C	Communication Skills	C	0	2	-
EEWS102C	Electronics Workshop - I	C	0	2	-
<b>SEMESTER - 2</b>					
IDST232C	Data Structures and Algorithms	C	3	2	-
EDEL232C	Digital Electronics	C	3	2	-
SMAT232C	Mathematics - II	C	3	2	-
IC0A230C	Computer Organization and Architecture	C	3	0	-
IDIM230C	Discrete Mathematics	C	3	0	-
MCST220C	Communication Skills and Technical Writing	C	2	0	-
<b>SEMESTER - 3</b>					
SMAT330C	Mathematics - III	C	3	0	-
I00M332C	Object Oriented Methodology	C	3	2	-
I0SY332C	Operating Systems	C	3	2	-
EMPR332C	Microprocessor	C	3	2	-

MPOM330C	Principles of Management	C	3	0	-
ITOC330C	Theory of Computation	C	3	0	-
<b>SEMESTER - 4</b>					
IDMS432C	Database Management System	C	3	2	-
IPPL432C	Principle of Programming Languages	C	3	0	-
IDCM432C	Digital Communication	C	3	2	-
IDAA432C	Design & Analysis of Algorithms	C	3	2	-
IPNS432C	Probability and Statistics	C	3	2	-
<b>SEMESTER - 5</b>					
ISOE532C	Software Engineering	C	3	2	-
MPOE530C	Principles of Economics	C	3	0	-
ICOG532C	Graphics and Visual Computing	C	3	2	-
IAIN532C	Artificial Intelligence	C	3	2	-
ICON532C	Computer Network	C	3	2	-
IPRJ504P	Mini Project	P	0	4	-
<b>SEMESTER - 6</b>					
IDMW632C	Data Mining and Warehousing	C	3	2	-
ICOD632C	Compiler Design	C	3	2	-
IWBT623C	Web Technologies	C	2	3	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
IPRJ604P	Project	P	0	4	-
<b>SEMESTER - 7</b>					
ISIM732C	Simulation and Modelling	C	3	2	-
MPOS720C	Philosophy of Science	C	2	0	-
MORB720C	Organizational Behaviour	C	2	0	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
IPRJ705P	Mini Project	P	0	5	-
<b>SEMESTER - 8</b>					
IPRJ820P	Project/Dissertation	P	0	20	-
<b>ELECTIVES</b>					
I00T630E	Optimization Techniques	E	3	0	-
INLP630E	Natural Language Processing	E	3	0	-
ISCO630E	Soft Computing	E	3	0	-
IIVP630E	Image and Vision Processing	E	3	0	-
IRIA630E	Robotics and industrial Automation	E	3	0	-
ICCS630E	Control Systems	E	3	0	-
IMCO730E	Mobile Computing	E	3	0	-
IHUR730E	Humanoid Robotics	E	3	0	-
IDCO730E	Data Compression	E	3	0	-
IINP730E	Internet Protocol	E	3	0	-
IMDM730E	Mobile Data Management	E	3	0	-
ICCP730E	Cognition and Cognitive Process Modelling	E	3	0	-
IESE730E	Embedded Software Engineering	E	3	0	-
IIRT730E	Information Retrieval	E	3	0	-
ICIS730E	Cryptography and Information Security	E	3	0	-

Table 2.5: Curriculum of B.Tech (IT): 2012-16

## 2.2 B.Tech (ECE)

Bachelors of Technology in Electronics and Communication Engineering (ECE) is a 4-year programme. The curricula of various batches are as follows:

### 2.2.1 B.Tech (ECE): 2016-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SCDE130C	Calculus and differential Equation	C	3	0	-
SEGP132C	Engineering Physics - I	C	3	2	-
ECAS130C	Circuit Analysis and Synthesis	C	3	0	-
EEDC132C	Electronic Devices and Circuits	C	3	2	-
IIPG132C	Introduction to Programming	C	3	2	-
IITC102C	Introduction to Computers	C	0	2	-
MPCN102C	Professional Communication	F	0	2	-
<b>SEMESTER - 2</b>					
SPAS230C	Probability and Statistics	C	3	0	-
EDES232C	Digital Electronics	C	3	2	-
ICOA230C	Computer Organization and Architecture	C	3	0	According to IT Department
IDST232C	Data Structure	C	3	2	According to IT Department
MPOM230F	Principles of Management	F	3	0	-
IDMA230C	Discrete Mathematics	C	3	0	According to IT/AS Department
<b>SEMESTER - 3</b>					
EACN332C	Analog Communication	C	3	2	-
EAES332C	Analog Electronics	C	3	2	EEDC132C
EEFW330C	Electromagnetic Field and Waves	C	3	0	-
EBEE332C	Basic Electrical Engineering	C	3	2	-
IOPS332C	Operating Systems	C	3	2	According to IT Department
<b>SEMESTER - 4</b>					
ESAS430C	Discrete Time Signals and Systems	C	3	0	EACN332C
EEMI432C	Electronics Measurement and Instrumentation	C	3	2	-
EMIP432C	Micro Processor Interface and Programming	C	3	2	EDEL232C
EMWE432C	Microwave Engineering	C	3	2	EEFW330C
EICT430C	Integrated Circuits Technology	C	3	0	EEDC132C
MMAM430C	Marketing Management	C	3	0	-
<b>SEMESTER - 5</b>					
EDCN532C	Digital Communication	C	3	2	ESAS430C
ECSY532C	Control Systems	C	3	2	-
EAWP532C	Antenna and Wave Propagation	C	3	2	EEFW330C
ICNE532C	Computer Networks	C	3	2	-
MPOE530C	Principles of Economics	C	3	0	-
EPRJ505P	Mini Project - 1	P	0	5	-
<b>SEMESTER - 6</b>					
EDSP632C	Digital Signal Processing	C	3	2	ESAS430C
EOCN632C	Optical Communication	C	3	2	EDCN532C
EDID632C	Digital IC Design	C	3	2	-
	Elective - 1	E	3	0	-

EPRJ605P	Elective - 2 Mini Project - 2	E P	3 0	0 5	- -
<b>SEMESTER - 7</b>					
EESD732C	Embedded System Design	C	3	2	EMIP432C
EWCN732C	Wireless Communication	C	3	2	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
	Elective - 5	E	3	0	-
EPRJ705P	Mini Project - 3	P	0	5	-
<b>SEMESTER - 8</b>					
EPRJ820P	Major Project	P	0	20	-
<b>ELECTIVES</b>					
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPBS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	According to IT Department
EDIP730E	Digital Image Processing	E	3	0	ESAS430C
EADS730E	Advanced Digital Signal Processing	E	3	0	EDSP632C
EAIC730E	Analog Integrated Circuit Design	E	3	0	EAES332C
EMIC730E	Mixed Signal Integrated Circuit Design	E	3	0	EAES332C
ERFC730E	Radio Frequency Circuit Design	E	3	0	EAES332C
EMES730E	Micro Electromechanical Systems	E	3	0	EICT430C
EMCS730E	Modern Control Systems	E	3	0	ECSY532C
ERSC730E	RADAR and Satellite Communication	E	3	0	EDCN532C EAWP532C
EONW730E	Optical Networks	E	3	0	EOCN632C
EODC730E	Optoelectronic Devices and Circuits	E	3	0	EOCN632C
EMIM730E	MIMO Communication	E	3	0	EACN332C EDCN532C
ELPD730E	Low Power System Design	E	3	0	-
EMSD730E	Modeling and Analysis of Semiconductor Devices	E	3	0	EEDC132C

Table 2.6: Curriculum of B.Tech (ECE): 2016-20

## 2.2.2 B.Tech (ECE): 2015-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SCDE130C	Calculus and differential Equation	C	3	0	-
SEGP132C	Engineering Physics - I	C	3	2	-
ECAS130C	Circuit Analysis and Synthesis	C	3	0	-
EEDC132C	Electronic Devices and Circuits	C	3	2	-
IIPG132C	Introduction to Programming	C	3	2	-
IITC102C	Introduction to Computers	C	0	2	-
MPCN102F	Professional Communication	F	0	2	-
<b>SEMESTER - 2</b>					
SPAS230C	Probability and Statistics	C	3	0	-
EDES232C	Digital Electronics	C	3	2	-
IC0A230C	Computer Organization and Architecture	C	3	0	According to IT Department
IDST232C	Data Structure	C	3	2	According to IT Department
MPOM230F	Principles of Management	F	3	0	-
IDMA230C	Discrete Mathematics	C	3	0	According to IT/AS Department



	<b>SEMESTER - 3</b>				
EACN332C	Analog Communication	C	3	2	-
EAES332C	Analog Electronics	C	3	2	EEDC132C
EEFW330C	Electromagnetic Field and Waves	C	3	0	-
EBEE332C	Basic Electrical Engineering	C	3	2	-
IOPS332C	Operating Systems	C	3	2	According to IT Department
	<b>SEMESTER - 4</b>				
ESAS430C	Discrete Time Signals and Systems	C	3	0	EACN332C
EEMI432C	Electronics Measurement and Instrumentation	C	3	2	-
EMIP432C	Micro Processor Interface and Programming	C	3	2	EDEL232C
EMWE432C	Microwave Engineering	C	3	2	EEFW330C
EICT430C	Integrated Circuits Technology	C	3	0	EEDC132C
MMAM430C	Marketing Management	C	3	0	-
	<b>SEMESTER - 5</b>				
EDCN532C	Digital Communication	C	3	2	ESAS430C
ECSY532C	Control Systems	C	3	2	-
EAWP532C	Antenna and Wave Propagation	C	3	2	EEFW330C
ICNE532C	Computer Networks	C	3	2	-
MPOE530C	Principles of Economics	C	3	0	-
EPRJ505P	Mini Project - 1	P	0	5	-
	<b>SEMESTER - 6</b>				
EDSP632C	Digital Signal Processing	C	3	2	ESAS430C
EOCN632C	Optical Communication	C	3	2	EDCN532C
EDID632C	Digital IC Design	C	3	2	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
EPRJ605P	Mini Project - 2	P	0	5	-
	<b>SEMESTER - 7</b>				
EESD732C	Embedded System Design	C	3	2	EMIP432C
EWCN732C	Wireless Communication	C	3	2	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
	Elective - 5	E	3	0	-
EPRJ705P	Mini Project - 3	P	0	5	-
	<b>SEMESTER - 8</b>				
EPRJ820P	Major Project	P	0	20	-
	<b>ELECTIVES</b>				
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPBS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	According to IT Department
EDIP730E	Digital Image Processing	E	3	0	ESAS430C
EADS730E	Advanced Digital Signal Processing	E	3	0	EDSP632C
EAIC730E	Analog Integrated Circuit Design	E	3	0	EAES332C
EMIC730E	Mixed Signal Integrated Circuit Design	E	3	0	EAES332C
ERFC730E	Radio Frequency Circuit Design	E	3	0	EAES332C
EMES730E	Micro Electromechanical Systems	E	3	0	EICT430C
EMCS730E	Modern Control Systems	E	3	0	ECSY532C
ERSC730E	RADAR and Satellite Communication	E	3	0	EDCN532C EAWP532C
EONW730E	Optical Networks	E	3	0	EOCN632C
EODC730E	Optoelectronic Devices and Circuits	E	3	0	EOCN632C

EMIM730E	MIMO Communication	E	3	0	EACN332C EDCN532C
ELPD730E	Low Power System Design	E	3	0	-
EMSD730E	Modeling and Analysis of Semiconductor Devices	E	3	0	EEDC132C

Table 2.7: Curriculum of B.Tech (ECE): 2015-19

### 2.2.3 B.Tech (ECE): 2014-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SMAT130C	Mathematics - I	C	3	0	-
SPHY132C	Physics - I	C	3	2	-
ECAS130C	Circuit Analysis and Synthesis	C	3	0	-
EEDC132C	Electronic Devices and Circuits	C	3	2	-
IITP132C	Introduction to Programming	C	3	2	-
IITC102C	Introduction to Computers	C	0	2	-
MLCS102C	Communication Skills	C	0	2	-
<b>SEMESTER - 2</b>					
EEMF230C	Electromagnetic Field and Waves	C	3	0	-
EDEL232C	Digital Electronics	C	3	2	-
ICOA230C	Computer Organization and Architecture	C	3	0	According to IT Department
IDSA232C	Data Structure	C	3	2	According to IT Department
MPME230C	Principles of Management and Economics	C	3	0	-
SMAT232C	Maths - II	C	3	2	According to IT/AS Department
<b>SEMESTER - 3</b>					
EACN332C	Analog Communication	C	3	2	-
EAES332C	Analog Electronics	C	3	2	EEDC132C
SPSP330C	Probability and Statistics	C	3	0	-
EBEE332C	Basic Electrical Engineering	C	3	2	-
IOSY332C	Operating Systems	C	3	2	According to IT Department
<b>SEMESTER - 4</b>					
ESAS430C	Discrete Time Signals and Systems	C	3	0	EACN332C
EEMI432C	Electronics Measurement and Instrumentation	C	3	2	-
EMIP432C	Micro Processor Interface and Programming	C	3	2	EDEL232C
EMWE432C	Microwave Engineering	C	3	2	EEFW330C
EICT430C	Integrated Circuit Technology	C	3	0	EEDC132C
MMRM430F	Marketing Management	F	3	0	-
<b>SEMESTER - 5</b>					
EDCN532C	Digital Communication	C	3	2	ESAS430C
ECSY532C	Control Systems	C	3	2	-
EAWP532C	Antenna and Wave Propagation	C	3	2	EEFW330C
ICNE532C	Computer Networks	C	3	2	-
MPOE530C	Principles of Economics	C	3	0	-
EPRJ505P	Mini Project - 1	P	0	5	-
<b>SEMESTER - 6</b>					
EDSP632C	Digital Signal Processing	C	3	2	ESAS430C
EOCN632C	Optical Communication	C	3	2	EDCN532C

EDID632C	Digital IC Design	C	3	2	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
EPRJ605P	Mini Project - 2	P	0	5	-
	<b>SEMESTER - 7</b>				
EESD732C	Embedded System Design	C	3	2	EMIP432C
EWCN732C	Wireless Communication	C	3	2	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
	Elective - 5	E	3	0	-
EPRJ705P	Mini Project 3	P	0	5	-
	<b>SEMESTER - 8</b>				
EPRJ820P	Major Project	P	0	20	-
	<b>ELECTIVES</b>				
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPBS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	According to IT Department
EDIP730E	Digital Image Processing	E	3	0	ESAS430C
EADS730E	Advanced Digital Signal Processing	E	3	0	EDSP632C
EAIC730E	Analog Integrated Circuit Design	E	3	0	EAES332C
EMIC730E	Mixed Signal Integrated Circuit Design	E	3	0	EAES332C
ERFC730E	Radio Frequency Circuit Design	E	3	0	EAES332C
EMES730E	Micro Electromechanical Systems	E	3	0	EICT430C
EMCS730E	Modern Control Systems	E	3	0	ECSY532C
ERSC730E	RADAR and Satellite Communication	E	3	0	EDCN532C EAWP532C
EONW730E	Optical Networks	E	3	0	EOCN632C
EODC730E	Optoelectronic Devices and Circuits	E	3	0	EOCN632C
EMIM730E	MIMO Communication	E	3	0	EACN332C EDCN532C
ELPD730E	Low Power System Design	E	3	0	-
EMSD730E	Modeling and Analysis of Semiconductor Devices	E	3	0	EEDC132C

Table 2.8: Curriculum of B.Tech (ECE): 2014-18

## 2.2.4 B.Tech (ECE): 2013-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b>				
SMAT130C	Mathematics - I	C	3	0	-
SPHY132C	Physics - I	C	3	2	-
EBEE132C	Electrical Engineering - I	C	3	2	-
EEDC132C	Electronic Devices and Circuits	C	3	2	-
IITP132C	Introduction to Programming	C	3	2	-
IITC102C	Introduction to Computers	C	0	2	-
MLCS102C	Communication Skills Lab	C	0	2	-
EEWS102C	Electronic Workshop - I	C	0	2	-
	<b>SEMESTER - 2</b>				
EDEL232C	Digital Electronics	C	3	2	-
SPHY232C	Physics - II	C	3	2	-
IDST232C	Data Structure	C	3	2	According to IT Department

MPOM220C	Principles of Management and Economics	C	2	0	According to IT Department
IDMA232C	Mathematics - II	C	3	2	-
MCST202C	Communication Skill and Technical Writing	C	0	2	According to IT/AS Department
EEWS202C	Electronic Workshop	C	0	2	-
<b>SEMESTER - 3</b>					
EACN332C	Analog Communication	C	3	2	-
ESAS330C	Signals and Systems	C	3	0	-
ELIC332C	Linear Integrated Circuits	C	3	2	-
SMAT330C	Mathematics - III	C	3	0	-
EBEE332C	Electrical Engineering - 2	C	3	2	-
ICOA330C	Computer Organization	C	3	0	According to IT Department
<b>SEMESTER - 4</b>					
MPST432C	Probability and Statistics Theory	C	3	2	-
EEMI432C	Electronic Measurement and Instrumentation	C	3	2	-
EMPI432C	Microprocessor Programming	C	3	2	-
EMWE432C	Microwave Engineering	C	3	2	-
EMET430C	Microelectronics Technology	C	3	0	-
EDCE432C	Digital Communication Engineering	C	3	2	-
<b>SEMESTER - 5</b>					
IDBM532C	Database Management Systems	C	3	2	-
ECSY532C	Control Systems	C	3	2	-
EAWP532C	Antenna and Wave Propagation	C	3	2	EEFW330C
ICNW532C	Computer Networks	C	3	2	-
MMEC520C	Managerial Economics	C	2	0	-
EPRJ505P	Mini Project	P	0	5	-
<b>SEMESTER - 6</b>					
EDSP632C	Digital Signal Processing	C	3	2	ESAS430C
EOCN632C	Optical Communication	C	3	2	EDCN532C
EVSD632C	VLSI Systems Design	C	3	2	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
EPRJ605P	Project	P	0	5	-
<b>SEMESTER - 7</b>					
EESD732C	Embedded System Design	C	3	2	EMIP432C
EWCN732C	Wireless Communication	C	3	2	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
	Elective - 5	E	3	0	-
EPRJ705P	Mini Project 3	P	0	5	-
<b>SEMESTER - 8</b>					
EPRJ820P	Major Project	P	0	20	-
<b>ELECTIVES</b>					
EHDM630E	Hardware Design Methodology	E	3	0	-
EDET630E	Detection and Estimation Theory	E	3	0	-
EAVT630E	Advance VLSI Devices and Technology	E	3	0	-
EWLN630E	Wireless Networks	E	3	0	-
ISCO630E	Soft Computing	E	3	0	According to IT Department
EVTV630E	VLSI Testing and Verification	E	3	0	-

IIVP630E	Image and Vision Processing	E	3	0	According to IT Department
IDMW630E	Data Mining and Warehousing	E	3	0	According to IT Department
EDIP730E	Digital Image Processing	E	3	0	ESAS430C
EADS730E	Advanced Digital Signal Processing	E	3	0	EDSP632C
EAIC730E	Analog Integrated Circuit Design	E	3	0	EAES332C
EMIC730E	Mixed Signal Integrated Circuit Design	E	3	0	EAES332C
ERFC730E	Radio Frequency Circuit Design	E	3	0	EAES332C
EMES730E	Micro Electromechanical Systems	E	3	0	EICT430C
EMCS730E	Modern Control Systems	E	3	0	ECSY532C
ERSC730E	RADAR and Satellite Communication	E	3	0	EDCN532C EAWP532C
EONW730E	Optical Networks	E	3	0	EOCN632C
EODC730E	Optoelectronic Devices and Circuits	E	3	0	EOCN632C
EMIM730E	MIMO Communication	E	3	0	EACN332C EDCN532C
ELPD730E	Low Power System Design	E	3	0	-
EMSD730E	Modeling and Analysis of Semiconductor Devices	E	3	0	EEDC132C
IDC0730E	Data Compression	E	3	0	-
ICCS730E	Cognition and Cognitive Process Modeling	E	3	0	-
IDBS730E	Database Security	E	3	0	-
EPES730E	Power Electronics	E	3	0	-

Table 2.9: Curriculum of B.Tech (ECE): 2013-17

### 2.2.5 B.Tech (ECE): 2012-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SMAT130C	Mathematics - I	C	3	0	-
SPHY132C	Physics - I	C	3	2	-
EEDC132C	Electronic Devices and Circuits	C	3	2	-
IITP133C	Introduction to Programming	C	3	3	-
EBEE132C	Electrical Engineering - I	C	3	2	-
MLCS102C	Communication Skills	C	0	2	-
EEWS102C	Electronics Workshop	C	0	2	-
<b>SEMESTER - 2</b>					
SPHY232C	Physics - II	C	3	2	-
EDEL232C	Digital Electronics	C	3	2	-
IDST232C	Data Structures and Algorithms	C	3	2	According to IT Department
MPOM230C	Principles of Management and Economics	C	2	0	-
IDMA230C	Mathematics - II	C	3	0	According to IT/AS Department
<b>SEMESTER - 3</b>					
EACN332C	Analog Communication	C	3	2	-
ELIC332C	Linear Integrated Circuits	C	3	2	-
ICOA330C	Computer Organization	C	3	0	-
SMAT330C	Mathematics - III	C	3	0	-
EBEE332C	Electrical Engineering - II	C	3	2	-
ESAS330C	Signals and Systems	C	3	0	-
<b>SEMESTER - 4</b>					
EMET430C	Micro Electronics Technology	C	3	0	-
EEMI432C	Electronic Measurement	C	3	2	-

EMIP432C	Microprocessor Programming	C	3	2	EDEL232C
EMWE432C	RF Microwave Technology	C	3	2	EEFW330C
EDCN432C	Digital Communication and Modulation	C	3	2	-
SMAT432C	Mathematics - IV	C	3	2	-
<b>SEMESTER - 5</b>					
EESD532C	Electronic System Design	C	3	2	-
EICE532C	Instrumentation and Control	C	3	2	-
EAWP532C	Antenna and Wave	C	3	2	EEFW330C
ICNE532C	Computer Network	C	3	2	-
EPES532C	Power Electronics	C	3	2	-
EPRJ504P	Mini Project	P	0	4	-
<b>SEMESTER - 6</b>					
EDSP632C	Digital Signal Processing	C	3	2	ESAS430C
EVL632C	VLSI Design	C	3	2	-
EOCN632C	Optical Communication	C	3	2	EDCN532C
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
EPRJ604P	Project	P	0	4	-
<b>SEMESTER - 7</b>					
ERSC732C	Radar and Satellite Communication	C	3	2	-
EWCE732C	Wireless Communication Engineering	C	3	2	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
EPRJ705P	Mini Project	P	0	5	-
<b>SEMESTER - 8</b>					
EPRJ820P	Project	P	0	20	-
<b>ELECTIVES</b>					
EEMS630E	Embedded System	E	3	0	-
IESC630E	Soft Computing	E	3	0	-
IEVP630E	Image and Vision Processing	E	3	0	-
IEOT630E	Operation Research and Optimization	E	3	0	-
IERA630E	Robotics and Industrial Automation	E	3	0	-
EMIC730E	Mixed Signal Integrated Circuit Design	E	3	0	-
EMES730E	Micro Electromechanical Systems	E	3	0	-
IDC0730E	Data Compression	E	3	0	-
EOPN730E	Optical Networks	E	3	0	-
EMDC730E	Electronic Devices and Circuits	E	3	0	-
ICIS730E	Cryptography and Information Theory	E	3	0	-
ICCP730E	Cognition and Cognitive Process Modeling	E	3	0	-

Table 2.10: Curriculum of B.Tech (ECE): 2012-16

## 3. Postgraduate Programmes

The following courses are part of Postgraduate programmes offered at IIIT Allahabad.

### 3.1 M.Tech IT (BI)

The curricula for Master of Technology in IT with specialization in Bioinformatics is as follows:

#### 3.1.1 M.Tech IT (BI): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SOMI131C	Omics - I	C	3	1	-
SBDA131C	Biological Data Analytics	C	3	1	-
SBIS131C	Biological Information System and Management	C	3	1	-
SSCE131C	Scripting and Computer Environments	C	3	1	-
<b>SEMESTER - 2</b>					
SOMI231C	Omics - II	C	3	1	-
SNGS231C	Next Generation Sequencing Tools and Algorithms	C	3	1	-
SCIM231C	Cheminformatics and Molecular modeling	C	3	1	-
SMSP231C	Molecular Structure Prediction	C	3	1	-
<b>SEMESTER - 3</b>					
Elective - 1		E	3	1	-
Elective - 2		E	3	1	-
SPRJ312P	Mini Project	P	0	12	-
<b>SEMESTER - 4</b>					
STHS420P	M.Tech Thesis	P	0	20	-
<b>ELECTIVES</b>					
SMLB331E	Machine Learning in Biological Systems	E	3	1	-
SMMD331E	Molecular Medicine	E	3	1	-
SBIP331E	Biological Imaging and Processing	E	3	1	-
SCNS331E	Computational Neurosciences	E	3	1	-
SBAN331E	Big-data Analytics	E	3	1	-

Table 3.1: Curriculum of M.Tech IT (BI): 2016-18

#### 3.1.2 M.Tech IT (BI): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SIGP131C	Introduction to Genomics and Proteomics	C	3	1	-
SBMS131C	Biomathematics and Statistics	C	3	1	-
SFC0131C	Fundamental of Computers (a)	C	3	1	-
SDSA131C	Data Structure and Algorithms (a)	C	3	1	-
SBSY131C	Biological Systems (b)	C	3	1	-
IAAP113C	Algorithmic Analysis & Programming Practices (b)	C	1	3	-
<b>SEMESTER - 2</b>					
SBDS231C	Biological Databases	C	3	1	-
SLAT231C	Language, Algorithm and Tools	C	3	1	-
	Elective - 1	E	3	1	-
	Elective - 2	E	3	1	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	3	1	-
	Elective - 4	E	3	1	-
SPRJ312P	Mini Project	P	0	12	-
<b>SEMESTER - 4</b>					
STHS420P	M.Tech Thesis	P	0	20	-
<b>ELECTIVES</b>					
SDMB231E	Data Mining in Biological Systems	E	3	1	-
SBNT231E	Bio-nanotechnology	E	3	1	-
SCAD231E	Computer-Aided Drug Design	E	3	1	-
SMSP231E	Molecular Structure Prediction and Visualization	E	3	1	-
SSYB331E	Systems Biology	E	3	1	-
SCIF331E	Cheminformatics	E	3	1	-
SSYB331E	Systems Biology for Biological Systems	E	3	1	-
SMLB331E	Machine Learning for Biological Systems	E	3	1	-
IPAC331E	Parallel Computing	E	3	1	-

Table 3.2: Curriculum of M.Tech IT (BI): 2015-17

Note: (a) for non-CS/IT Students, (b) for CS/IT Students

### 3.1.3 M.Tech IT (BI): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SIGP131C	Introduction to Genomics and Proteomics	C	3	1	-
SBMS131C	Biomathematics and Statistics	C	3	1	-
SFC0131C	Fundamental of Computers (a)	C	3	1	-
SDSA131C	Data Structure and Algorithms (a)	C	3	1	-
SBSY131C	Biological Systems (b)	C	3	1	-
IAAP113C	Algorithmic Analysis and Programming Practices (b)	C	1	3	-
<b>SEMESTER - 2</b>					
SBDS231C	Biological Database and Sequencing	C	3	1	-



SLAT231C	Language, Algorithm and Tools	C	3	1	-
	Elective - 1	E	3	1	-
	Elective - 2	E	3	1	-
	<b>SEMESTER - 3</b>				
	Elective - 3	E	3	1	-
	Elective - 4	E	3	1	-
SPRJ312P	Mini Project	P	0	12	-
	<b>SEMESTER - 4</b>				
STHS420P	M.Tech Thesis	P	0	20	-
	<b>ELECTIVES</b>				
SMSP231E	Molecular Structure Prediction and Visualisation	E	3	1	-
SCAD231E	Computer Aided Drug Design	E	3	1	-
SDMB231E	Data Mining in Biological Systems	E	3	1	-
SSYB331E	Systems Biology	E	3	1	-
SCIF331E	Cheminformatics	E	3	1	-
SMLB331E	Machine Learning for Biological Systems	E	3	1	-
IPAC331E	Parallel Computing	E	3	1	-

Table 3.3: Curriculum of M.Tech IT (BI): 2014-16

Note: (a) for non-CS/IT Students, (b) for CS/IT Students

## 3.2 M.Tech IT (CLIS)

The curricula for Master of Technology in IT with specialization in Cyber Law and Information Security is as follows:

### 3.2.1 M.Tech IT (CLIS): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b>				
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMIT140C	Mathematics for IT	C	4	0	-
IINP140C	Internet Protocols	C	4	0	-
ICRP140C	Introduction to Cryptography	C	4	0	-
	<b>SEMESTER - 2</b>				
ICLS240C	Cyber Laws and Security Standards	C	4	0	ICRP140C
INSE240C	Network Security	C	4	0	ICRP140C
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 3</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				

IADC240E	Advanced Cryptography	E	4	0	-
IMWS240E	Mobile and Wireless Security	E	4	0	-
ICFN240E	Computer Forensics	E	4	0	-
ISAC240E	Security Architecture	E	4	0	-
ITRA240E	Technical Risk Assessment	E	4	0	-
ISSE240E	Software Security	E	4	0	-
IISA240E	Information Security Audit	E	4	0	-
IIAM240E	Identity and Access Management	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDBS340E	Database Security	E	4	0	-
IOSS340E	Operating System Security	E	4	0	-
IBCP340E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA340E	Security Audit	E	4	0	-
ICVS340E	Cloud and Virtualization Security	E	4	0	-
IISP340E	Information and Information System Privacy	E	4	0	-

Table 3.4: Curriculum of M.Tech IT (CLIS): 2016-18

### 3.2.2 M.Tech IT (CLIS): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IINP140C	Internet Protocols	C	4	0	-
ICIS140C	Introduction to Cryptography	C	4	0	-
ICLS140C	Cyber Laws & Security Standards	C	4	0	-
<b>SEMESTER - 2</b>					
IADC240C	Advanced Cryptography	C	4	0	ICRP140C
INSE240C	Network Security	C	4	0	ICRP140C
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
ICFN240E	Computer Forensics	E	4	0	-
ISAC240E	Security Architecture	E	4	0	-
ITRA240E	Technical Risk Assessment	E	4	0	-
ISSE240E	Software Security	E	4	0	-
IISA240E	Information Security Audit	E	4	0	-
IIAM240E	Identity and Access Management	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IDBS340E	Database Security	E	4	0	-
IOSS340E	Operating System Security	E	4	0	-
IBCP340E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-

ISCA340E	Security Audit	E	4	0	-
ICVS340E	Cloud and Virtualization Security	E	4	0	-
IISP340E	Information and Information System Privacy	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-

Table 3.5: Curriculum of M.Tech IT (CLIS): 2015-17

### 3.2.3 M.Tech IT (CLIS): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IINP140C	Internet Protocols	C	4	0	-
ICRP140C	Introduction to Cryptography	C	4	0	-
ICLS140C	Cyber Laws & Security Standards	C	4	0	-
<b>SEMESTER - 2</b>					
IADC240C	Advanced Cryptography	C	4	0	-
INSE240C	Network Security	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	Mini Project	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
ICFN240E	Computer Forensics	E	4	0	-
ISAC240E	Security Architecture	E	4	0	-
ITRA240E	Technical Risk Assessment	E	4	0	-
ISSE240E	Software Security	E	4	0	-
IISA240E	Information Security Audit	E	4	0	-
IIAM240E	Identity and Access Management	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDBS340E	Database Security	E	4	0	-
IOSS340E	Operating System Security	E	4	0	-
IBCP340E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA340E	Security Audit	E	4	0	-
ICVS340E	Cloud and Virtualization Security	E	4	0	-
IISP340E	Information and Information System Privacy	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
MBCP340E	BCP & BRP	E	4	0	-

Table 3.6: Curriculum of M.Tech IT (CLIS): 2014-16

### 3.3 M.Tech IT (HCI)

The curricula for the Master of Technology in IT with specialization in Human Computer Interaction is as follows:

### 3.3.1 M.Tech IT (HCI): 2016-18

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMIT140C	Mathematics for IT	C	4	0	-
ICCP140C	Cognition and Cognitive Process Modeling	C	4	0	-
ICII140C	Computational Intelligence	C	4	0	-
<b>SEMESTER - 2</b>					
IIVP240C	Image and Vision Processing	C	4	0	-
IAGA240C	Advanced Graphics and Animation	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IADM240E	Advanced Database Management System	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IPID340E	Principles of Interactive Design	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-

Table 3.7: Curriculum of M.Tech IT (HCI): 2016-18

### 3.3.2 M.Tech IT (HCI): 2015-17

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
ICCP140C	Cognition and Cognitive Process Modeling	C	4	0	-
ICOI140C	Computational Intelligence	C	4	0	-
IPID140C	Principles of Interaction Design	C	4	0	-
<b>SEMESTER - 2</b>					
IIVP240C	Image and Vision Processing	C	4	0	-
IAGA240C	Advanced Graphics and Animation	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					

ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IADM240E	Advanced Database Management System	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
ISCO230E	Soft Computing	E	3	0	-
IDSS840E	Distributed Systems	E	4	0	-
IIRS340E	Information Retrieval	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-

Table 3.8: Curriculum of M.Tech IT (HCI): 2015-17

### 3.3.3 M.Tech IT (HCI): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
ICCM140C	Cognition and Cognitive Process Modeling	C	4	0	-
ICOI140C	Computational Intelligence	C	4	0	-
IPID140C	Principles of Interaction Design	C	4	0	-
<b>SEMESTER - 2</b>					
IIVP240C	Image and Vision Processing	C	4	0	-
IAGA240C	Advanced Graphics and Animation	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IADM240E	Advanced Database Management System	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
ISDK240E	Software for Data and Knowledge Engineering	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IIRT340E	Information Retrieval	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-

Table 3.9: Curriculum of M.Tech IT (HCI): 2014-16

### 3.4 M.Tech IT (IS)

The curricula for Master of Technology in IT with specialization in Intelligent Systems is as follows:

#### 3.4.1 M.Tech IT (IS): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMIT140C	Mathematics for IT	C	4	0	-
ICCP140C	Cognition and Cognitive Process Modeling	C	4	0	-
ICII140C	Computational Intelligence	C	4	0	-
<b>SEMESTER - 2</b>					
IALS240C	Artificial Life Simulation	C	4	0	-
IIVP240C	Image and Vision Processing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IDSD240E	Digital System Design	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-

Table 3.10: Curriculum of M.Tech IT (IS): 2016-18

#### 3.4.2 M.Tech IT (IS): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
SPSP140C	Probability & Stochastic Process	C	4	0	-
ICCP140C	Cognition and Cognitive Process Modeling	C	4	0	-
ICOI140C	Computational Intelligence	C	4	0	-
<b>SEMESTER - 2</b>					
ISC0240C	Soft Computing	C	4	0	-
IIVP240C	Image and Vision Processing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					

	Elective - 3	E	4	0	
	Elective - 4	E	4	0	
ITHS312P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IDSD240E	Digital System Design	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IIRS340E	Information Retrieval	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
IDRT340E	Graph Theory	E	4	0	-

Table 3.11: Curriculum of M.Tech IT (IS): 2015-17

### 3.4.3 M.Tech IT (IS): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b>				
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IAIS140C	Architecture of Intelligent System	C	4	0	-
ICCM140C	Cognition and Cognitive Process Modeling	C	4	0	-
ICOI140C	Computational Intelligence	C	4	0	-
	<b>SEMESTER - 2</b>				
ISC0240C	Soft Computing	C	4	0	-
IIVP240C	Image and Vision Processing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 3</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IDSD240E	Digital System Design	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
ISDK240E	Software Systems for Data Mining and Knowledge Engineering	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IIRT340E	Information Retrieval	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-

IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-

Table 3.12: Curriculum of M.Tech IT (IS): 2014-16

### 3.5 M.Tech IT (RO)

The curricula for Master of Technology in IT with specialization in Robotics is as follows:

#### 3.5.1 M.Tech IT (RO): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMIT140C	Mathematics for IT	C	4	0	-
IMFR140C	Mathematical Foundation of Robotics	C	4	0	-
ECSE140C	Control System Engineering	C	4	0	-
<b>SEMESTER - 2</b>					
IALS240C	Artificial Life simulation	C	4	0	-
ISCO240C	Soft Computing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IIVP240E	Image and Video Processing	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
INDS340E	Nonlinear Dynamics	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-

Table 3.13: Curriculum of M.Tech IT (RO) - 2016-18

#### 3.5.2 M.Tech IT (RO): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMFR140C	Mathematical Foundation of Robotics	C	4	0	-
ECSY140C	Control System Engineering	C	4	0	-
ICOI140C	Computational Intelligence	C	4	0	-
<b>SEMESTER - 2</b>					



IIVP240C	Image and Vision processing	C	4	0	-
IALS240C	Artificial Life simulation	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 3</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IPC0240E	Parallel Computing	E	4	0	-
ISC0240E	Soft Computing	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-

Table 3.14: Curriculum of M.Tech IT (RO) - 2015-17

### 3.5.3 M.Tech IT (RO): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b>				
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMFR140C	Mathematical Foundation of Robotics	C	4	0	-
ECSE140C	Control System Engineering	C	4	0	-
IC01140C	Computational Intelligence	C	4	0	-
	<b>SEMESTER - 2</b>				
IALS240C	Artificial Life simulation	C	4	0	-
ISC0240C	Soft Computing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 3</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	Thesis	P	12	0	-
	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IIVP240E	Image and Vision Processing	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-

IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-

Table 3.15: Curriculum of M.Tech IT (RO) - 2014-16

### 3.6 M.Tech IT (SE)

The curricula for Master of Technology in IT with specialization in Software Engineering is as follows:

#### 3.6.1 M.Tech IT (SE): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMIT140C	Mathematics for IT	C	4	0	-
ISOM140C	Software Metrics	C	4	0	-
ISRE140C	Software Requirements and Estimation	C	4	0	-
<b>SEMESTER - 2</b>					
ISTQ240C	Software Testing & Quality Management	C	4	0	-
IASS240C	Architecture of Software Systems	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IERP240E	Enterprise Resource Planning	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
I00D340E	Object Oriented Software Engineering and Design Patterns	E	4	0	-
IMSE340E	Mobile Software Engineering	E	4	0	-
IEMS340E	Embedded Systems	E	4	0	-
IABS340E	Agent Based Systems	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-

Table 3.16: Curriculum of M.Tech IT (SE): 2016-18

#### 3.6.2 M.Tech IT (SE): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					

IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IOSE140C	Object Oriented Software Engineering	C	4	0	-
ISWM140C	Software Metrics	C	4	0	-
ISRE140C	Software Requirements and Estimation	C	4	0	-
<b>SEMESTER - 2</b>					
ISTQ240C	Software Testing & Quality Management	C	4	0	-
IASS240C	Architecture of Software Systems	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IERP240E	Enterprise Resource Planning	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IPC0240E	Parallel Computing	E	4	0	-
IGRT240E	Graph Theory	E	4	0	-
IMCL240E	Machine Learning Tools and Techniques	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IIRS340E	Information Retrieval	E	4	0	-
ICCS340E	Cognition and Cognitive Process Modeling	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-

Table 3.17: Curriculum of M.Tech IT (SE): 2015-17

### 3.6.3 M.Tech IT (SE): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IOSE140C	Object Oriented Software Engineering	C	4	0	-
ISOM140C	Software Metrics	C	4	0	-
ISRA140C	Software Requirements and Estimation	C	4	0	-
<b>SEMESTER - 2</b>					
ISTQ240C	Software Testing & Quality Management	C	4	0	-
IASS240C	Architecture of Software Systems	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	Thesis	P	12	0	-

	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IERP240E	Enterprise Resource Planning	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
ISDK240E	Software for Data and knowledge Engineering	E	4	0	-
IIVP240E	Image and Vision Processing	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
ICCS340E	Cognition and Cognitive Process Modelling	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IESE340E	Embedded Software Engineering	E	4	0	-

Table 3.18: Curriculum of M.Tech IT (SE): 2014-16

### 3.7 M.Tech IT (WCE)

The curricula for Master of Technology in IT with specialization in Wireless and Communication Engineering is as follows:

#### 3.7.1 M.Tech IT (WCE): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b>				
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IMIT140C	Mathematics for IT	C	4	0	-
IINP140C	Internet Protocols	C	4	0	-
EWCS140C	Wireless Communications Systems	C	4	0	-
	<b>SEMESTER - 2</b>				
EVLN240C	Wireless Networks	C	4	0	EWCS140C
IGRT240C	Graph Theory	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 3</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 4</b>				
ITHS420P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-

ISCO240E	Soft Computing	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
EDSP240E	Digital Signal Processing	E	4	0	-
IMSE340E	Mobile Software Engineering	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
ECLN340E	Cellular Networks	E	4	0	-
ESAS340E	Smart Antennas	E	4	0	-

Table 3.19: Curriculum of M.Tech IT (WCE): 2016-18

### 3.7.2 M.Tech IT (WCE): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IINP140C	Internet Protocols	C	4	0	-
EWCE140C	Wireless Communications	C	4	0	-
SPSP140C	Probability & Stochastic Processes	C	4	0	-
<b>SEMESTER - 2</b>					
EVLN240C	Wireless Networks	C	4	0	EWCS140C
IGRT240C	Graph Theory	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
IPCO240E	Parallel Computing	E	4	0	-
EDET240E	Detection and Estimation Theory	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
EDSP240E	Digital Signal Processing	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
EODC340E	Optoelectronic Devices and Circuits	E	4	0	-
ERSC340E	Radar and Satellite Communication	E	4	0	-
EMIM340E	MIMO Communication	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-

Table 3.20: Curriculum of M.Tech IT (WCE): 2015-17

### 3.7.3 M.Tech IT (WCE): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
IAAP113C	Algorithmic Analysis & Programming Practices	C	1	3	-
IINP140C	Internet Protocols	C	4	0	-
EWCS140C	Wireless Communication	C	4	0	-
SPSP140C	Probability & Stochastic Processes	C	4	0	-
<b>SEMESTER - 2</b>					
EWNP240C	Wireless Networks	C	4	0	-
IGRT240C	Graph Theory	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS312P	Thesis	P	12	0	-
<b>SEMESTER - 4</b>					
ITHS420P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
EDSP240E	Digital Signal Processing	E	4	0	-
ISDK240E	Software for Data and Knowledge Engineering	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
EODC340E	Optoelectronic Devices and Circuits	E	4	0	-
ERSE340E	Radar and Satellite Communication	E	4	0	-
EMIM340E	MIMO Communication	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
EOPN340E	Optical Networks	E	4	0	-
IESE340E	Embedded Software Engineering	E	4	0	-

Table 3.21: Curriculum of M.Tech IT (WCE): 2014-16

### 3.8 M.Tech ECE (MI)

The curricula for Master of Technology in ECE with specialization in Microelectronics is as follows:

#### 3.8.1 M.Tech ECE (MI): 2016-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					

EESD140C	Embedded System Design	C	4	0	-
EDVD140C	Digital VLSI Design	C	4	0	-
EMSD140C	Modeling of Semiconductor Devices	C	4	0	-
EVL140C	VLSI Technology	C	4	0	-
<b>SEMESTER - 2</b>					
EVD240C	Advance VLSI Devices & Technology	C	4	0	-
EAIC240C	Analog Integrated Circuit Design	C	4	0	-
EHDM240C	Hardware Design Methodology	C	4	0	-
EVT240C	VLSI Testing and Verification	C	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
ETHS312P	Thesis	P	0	12	-
<b>SEMESTER - 4</b>					
ETHS420P	M.Tech Thesis	P	0	20	-
<b>ELECTIVES</b>					
EMES340E	Micro Electromechanical Systems	E	4	0	-
EMIC340E	Mixed Signal Integrated Circuit Design	E	4	0	-

Table 3.22: Curriculum of M.Tech (MI): 2016-18

### 3.8.2 M.Tech ECE (MI): 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
EVL140C	VLSI Technology	C	4	0	-
EESD140C	Embedded System Design	C	4	0	-
EDVD140C	Digital VLSI Design	C	4	0	-
EMSD140C	Modeling and Analysis of Semiconductor Devices	C	4	0	-
<b>SEMESTER - 2</b>					
EVT240C	VLSI Testing and Verification	C	4	0	-
EHDM240C	Hardware Design Methodology	C	4	0	-
EAVT240C	Advance VLSI Devices & Technology	C	4	0	-
EAIC240C	Analog Integrated Circuit Design	C	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
ETHS312P	Thesis	P	0	12	-
<b>SEMESTER - 4</b>					
ETHS420P	M.Tech Thesis	P	0	20	-
<b>ELECTIVES</b>					
EMES340E	Micro Electromechanical Systems	E	4	0	-
EMIC340E	Mixed Signal Integrated Circuit Design	E	4	0	-

Table 3.23: Curriculum of M.Tech (MI): 2015-17

### 3.8.3 M.Tech ECE (MI): 2014-16

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
EVL140C	VLSI Technology	C	4	0	-
ECES140C	Computer Architecture & Embedded System	C	4	0	-
EDVD140C	Digital VLSI Design	C	4	0	-
EMOA140C	Modeling & Analysis of VLSI	C	4	0	-
<b>SEMESTER - 2</b>					
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
<b>SEMESTER - 3</b>					
	Elective - 5	E	4	0	-
	Elective - 6	E	4	0	-
ETHS312P	Thesis	P	0	12	-
<b>SEMESTER - 4</b>					
ETHS420P	M.Tech Thesis	P	0	20	-
<b>ELECTIVES</b>					
ETNV240E	Testing and Verification	E	4	0	-
EHDM240E	Hardware Design Methodology	E	4	0	-
EVDT240E	Advance VLSI Devices & Technology	E	4	0	-
EAVD240E	Analog VLSI Design	E	4	0	-
EMES340E	Micro Electromechanical Systems	E	4	0	-
EMIC340E	Mixed Signal IC Design	E	4	0	-

Table 3.24: Curriculum of M.Tech (MI): 2014-16

## 3.9 MBA

The curricula for Master of Business Administration is as follows:

### 3.9.1 MBA: 2016-18

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
MFAC120C	Financial Accounting	C	2	0	-
SBSS122C	Business Statistics	C	2	2	-
MPOM120C	Principles of Management	C	2	0	-
MMGE120C	Managerial Economics	C	2	0	-
MBUE120C	Business Environment	C	2	0	-
IMIS120C	Management Information System	C	2	0	-
ICNW122C	Computer Networks	C	2	2	-
MBUL120C	Business Law	C	2	0	-
<b>SEMESTER - 2</b>					
MREM222C	Research Methodology	C	2	2	-
MFNM220C	Financial Management	C	2	0	-



MOPM220C	Operations and Production Management	C	2	0	-
SORS222C	Operation Research	C	2	2	-
MHRM220C	Human Resource Management	C	2	0	-
MMRM220C	Marketing Management	C	2	0	-
IDMS220C	Database Management Systems	C	2	0	-
MPMC220C	Process Management and Consulting	C	2	0	-
<b>SEMESTER - 3</b>					
MSTM320C	Strategic Management	C	2	0	-
IBDP320C	Business Continuity Plan and DRP	C	2	0	-
MORB320C	Organization Behaviour	C	2	0	-
IISM320C	IT Infrastructure and Service Management	C	2	0	-
ISWA322C	Social Media and Web Analytics	C	2	2	-
MEDI320C	Entrepreneurship Development and Innovation	C	2	0	-
ELT1320E	Elective - 1 (from one group)	E	2	0	-
ELT2320E	Elective - 2 (from another group)	E	2	0	-
MSTP302P	Literature review Problem formulation and Synopsis submission (R)/ Summer Internship (PG)	P	0	2	-
<b>SEMESTER - 4</b>					
IICC420C	IT Strategy and Cloud Computing	C	2	0	-
ICIT420C	COBIT	C	2	0	-
MIBM420C	International Business Management	C	2	0	-
IDMW422C	Data Mining and Warehousing	C	2	2	-
ELT3320E	Elective - 3 (from group of Elective-1)	E	2	0	-
ELT1420E	Elective - 4 (from group of Elective-1)	E	2	0	-
ELT1520E	Elective - 5 (from group of Elective-2)	E	2	0	-
ELT1620E	Elective - 6 (from group of Elective-2)	E	2	0	-
MSTP406P	Mini Project based on Ph.D. Topic (R) / Master Project (PG)	P	0	6	-
<b>ELECTIVES</b>					
MASM320E	(G1) Advertising and Socioal Media Strategy	E	2	0	MMRM220C
MMOS320E	(G1) Marketing of Services	E	2	0	MMRM220C
MDGM320E	(G1) Digital Marketing	E	2	0	MMRM220C
MTPF320E	(G2) Tax Planning and Financial Reporting	E	2	0	-
MSPM320E	(G2) Security Analysis and Portfolio Management	E	2	0	MFNM220C
MFAR320E	(G2) Financial Auditing and Reporting	E	2	0	-
MPML320E	(G3) Procurement Management and E -Logistics	E	2	0	MOPM220C
MOSM320E	(G3) Operation, Strategic Cost Management	E	2	0	MOPM220C
MQAC320E	(G3) Quality Assurance and Control	E	2	0	MOPM220C
ISEO320E	(G4) Search Engine Optimization	E	2	0	-
IRVT320E	(G4) Risk Vulnerability and Physical Assessment	E	2	0	-
IFIS320E	(G4) Fundamentals of Information Security	E	2	0	-
MEIL320E	(G5) Emotional Intelligence and Leadership	E	2	0	MHRM220C
MEBB320E	(G5) Employer Brand Building	E	2	0	MHRM220C
MRTM420E	(G1) Retail Management	E	2	0	Sem-3 G1 elect.
MITM420E	(G1) International Marketing	E	2	0	Sem-3 G1 elect.
MIDM420E	(G1) Industrial Marketing	E	2	0	Sem-3 G1 elect.
MKAM420E	(G1) Business Marketing and Key Account Management	E	2	0	Sem-3 G1 elect.
MTLM420E	(G1) Telecommunication Marketing	E	2	0	Sem-3 G1 elect.
MCBC420E	(G1) Consumer Behavior and CRM	E	2	0	Sem-3 G1 elect.
MFIE420E	(G2) Financial Engineering	E	2	0	Sem-3 G2 elect.
MEAA420E	(G2) Environment Analysis Accounting	E	2	0	Sem-3 G2 elect.
MIFM420E	(G2) International Financial Management	E	2	0	Sem-3 G2 elect.

MFIS420E	(G2) Management of Financial Institutions and Services	E	2	0	Sem-3 G2 elect.
MACM420E	(G2) Merger, Acquisition and Corporate Restructuring	E	2	0	Sem-3 G2 elect.
MRKM420E	(G2) Risk Management	E	2	0	Sem-3 G2 elect.
MPRM420E	(G3) Project Management	E	2	0	Sem-3 G3 elect.
MKNM420E	(G3) Knowledge Management	E	2	0	Sem-3 G3 elect.
MTQM420E	(G3) Total Quality Management	E	2	0	Sem-3 G3 elect.
SMMD420E	(G3) Mathematical Models for Management Decisions	E	2	0	Sem-3 G3 elect.
MMIC420E	(G3) Material Management and Inventory Control	E	2	0	Sem-3 G3 elect.
IESD420E	(G4) Expert System Design and Applications	E	2	0	Sem-3 G4 elect.
ISSE420E	(G4) System Analysis and Design and Software Engineering	E	2	0	Sem-3 G4 elect.
ISPM420E	(G4) Software Project Management	E	2	0	Sem-3 G4 elect.
IBUI420E	(G4) Business Intelligence	E	2	0	Sem-3 G4 elect.
MSRM420E	(G5) Strategic HRM	E	2	0	Sem-3 G5 elect.
MCRI420E	(G5) Creativity and Innovation	E	2	0	Sem-3 G5 elect.
MTRD420E	(G5) Training and Development	E	2	0	Sem-3 G5 elect.

Table 3.25: Curriculum of MBA: 2016-18

### 3.9.2 MBA: 2015-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
MFAC120C	Financial Accounting	C	2	0	-
SBSS122C	Business Statistics	C	2	2	-
MPOM120C	Principles of Management	C	2	0	-
MBGE120C	Managerial Economics	C	2	0	-
MBUE120C	Business Environment	C	2	0	-
IMIS120C	Management Information System	C	2	0	-
ICNN122C	Computer Networks	C	2	2	-
MBUL120C	Business Law	C	2	0	-
<b>SEMESTER - 2</b>					
MREM222C	Research Methodology	C	2	2	-
MFNM220C	Financial Management	C	2	0	-
MOPM220C	Operations and Production Management	C	2	0	-
SORS222C	Operation Research	C	2	2	-
MHRM220C	Human Resource Management	C	2	0	-
MMRM220C	Marketing Management	C	2	0	-
IDMS220C	Database Management Systems	C	2	0	-
MPMC220C	Process Management and Consulting	C	2	0	-
<b>SEMESTER - 3</b>					
MSTM320C	Strategic Management	C	2	0	-
IBDP320C	Business Continuity Plan and DRP	C	2	0	-
MORB320C	Organization Behaviour	C	2	0	-
IISM320C	IT Infrastructure and Service Management	C	2	0	-
ISWA322C	Social Media and Web Analytics	C	2	2	-
MEDI320C	Entrepreneurship Development and Innovation	C	2	0	-
	Elective - 1 (from one group)	E	2	0	-
	Elective - 2 (from another group)	E	2	0	-
MSTP302P	Literature review Problem formulation and Synopsis submission (R)/ Summer Internship (PG)	P	0	2	-

	<b>SEMESTER - 4</b>				
IICC420C	IT Strategy and Cloud Computing	C	2	0	-
ICIT420C	COBIT	C	2	0	-
MIBM420C	International Business Management	C	2	0	-
IDMW422C	Data Mining and Warehousing	C	2	2	-
	Elective - 3 (from group of Elective-1)	E	2	0	-
	Elective - 4 (from group of Elective-1)	E	2	0	-
	Elective - 5 (from group of Elective-2)	E	2	0	-
	Elective - 6 (from group of Elective-2)	E	2	0	-
MSTP406P	Mini Project based on Ph.D. Topic (R) / Master Project (PG)	P	0	6	-
	<b>ELECTIVES</b>				
MASM320E	(G1) Advertising and Socioal Media Strategy	E	2	0	MMRM220C
MMOS320E	(G1) Marketing of Services	E	2	0	MMRM220C
MDGM320E	(G1) Digital Marketing	E	2	0	MMRM220C
MTPF320E	(G2) Tax Planning and Financial Reporting	E	2	0	-
MSPM320E	(G2) Security Analysis and Portfolio Management	E	2	0	MFNM220C
MFAR320E	(G2) Financial Auditing and Reporting	E	2	0	-
MPML320E	(G3) Pocurement Management and E -Logistics	E	2	0	MOPM220C
MOSM320E	(G3) Operation, Strategic Cost Management	E	2	0	MOPM220C
MQAC320E	(G3) Quality Assurance and Control	E	2	0	MOPM220C
ISEO320E	(G4) Search Engine Optimization	E	2	0	-
IRVT320E	(G4) Risk Vulnerability and Physical Assessment	E	2	0	-
IFIS320E	(G4) Fundamentals of Information Security	E	2	0	-
MEIL320E	(G5) Emotional Intelligence and Leadership	E	2	0	MHRM220C
MEBB320E	(G5) Employer Brand Building	E	2	0	MHRM220C
MRTM420E	(G1) Retail Management	E	2	0	Sem-3 G1 elect.
MITM420E	(G1) International Marketing	E	2	0	Sem-3 G1 elect.
MIDM420E	(G1) Industrial Marketing	E	2	0	Sem-3 G1 elect.
MKAM420E	(G1) Business Marketing and Key Account Management	E	2	0	Sem-3 G1 elect.
MTLM420E	(G1) Telecommunication Marketing	E	2	0	Sem-3 G1 elect.
MCBC420E	(G1) Consumer Behavior and CRM	E	2	0	Sem-3 G1 elect.
MFIE420E	(G2) Financial Engineering	E	2	0	Sem-3 G2 elect.
MEAA420E	(G2) Environment Analysis Accounting	E	2	0	Sem-3 G2 elect.
MIFM420E	(G2) International Financial Management	E	2	0	Sem-3 G2 elect.
MFIS420E	(G2) Management of Financial Institutions and Services	E	2	0	Sem-3 G2 elect.
MACM420E	(G2) Merger, Acquisition and Corporate Restructuring	E	2	0	Sem-3 G2 elect.
MRKM420E	(G2) Risk Management	E	2	0	Sem-3 G2 elect.
MPRM420E	(G3) Project Management	E	2	0	Sem-3 G3 elect.
MKNM420E	(G3) Knowledge Management	E	2	0	Sem-3 G3 elect.
MTQM420E	(G3) Total Quality Management	E	2	0	Sem-3 G3 elect.
SMMD420E	(G3) Mathematical Models for Management Decisions	E	2	0	Sem-3 G3 elect.
MMIC420E	(G3) Material Management and Inventory Control	E	2	0	Sem-3 G3 elect.
IESD420E	(G4) Expert System Design and Applications	E	2	0	Sem-3 G4 elect.
ISSE420E	(G4) System Analysis and Desing and Software Engineering	E	2	0	Sem-3 G4 elect.
ISPM420E	(G4) Software Project Management	E	2	0	Sem-3 G4 elect.
IBUI420E	(G4) Business Intelligence	E	2	0	Sem-3 G4 elect.
MSRM420E	(G5) Strategic HRM	E	2	0	Sem-3 G5 elect.

MCRI420E	(G5) Creativity and Innovation	E	2	0	Sem-3 G5 elect.
MTRD420E	(G5) Training and Development	E	2	0	Sem-3 G5 elect.

Table 3.26: Curriculum of MBA: 2015-17

### 3.9.3 MBA (IT): 2014-16

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
MFAC120C	Financial Accounting	C	2	0	-
SBSS122C	Business Statistics	C	2	2	-
MPOM120C	Principles of Management	C	2	0	-
MMGE120C	Managerial Economics	C	2	0	-
MBUE120C	Business Environment	C	2	0	-
IMIS120C	Management Information System	C	2	0	-
ICNW122C	Computer Networks	C	2	2	-
MBUL120C	Business Law	C	2	0	-
<b>SEMESTER - 2</b>					
MRS222C	Research Methodology	C	2	2	-
MFMG220C	Financial Management	C	2	0	-
MOPM220C	Operations and Production Management	C	2	0	-
SOPR222C	Operation Research	C	2	2	-
MHRM220C	Human Resource Management	C	2	0	-
MMMG220C	Marketing Management	C	2	0	-
IDMS220C	Database Management Systems	C	2	0	-
MPMC220C	Process Management and Consulting	C	2	0	-
<b>SEMESTER - 3</b>					
MSTM320C	Strategic Management	C	2	0	-
IDMW322C	Data Mining and Warehousing	C	2	2	-
MORB320C	Organizational Behaviour	C	2	0	-
IISM320C	IT Infrastructure and Service Management	C	2	0	-
ISWA322C	Social Media and Web Analysis	C	2	2	-
MEDI320C	Entrepreneurship Development and Innovation	C	2	0	-
	Elective - 1 (from one group)	E	2	0	-
	Elective - 2 (from another group)	E	2	0	-
MSTP302P	Literature review Problem formulation and Synopsis submission (R)/ Summer Internship (PG)	P	0	2	-
<b>SEMESTER - 4</b>					
IBUI420C	Business Intelligence	C	2	0	-
IBDP420C	Business Continuity Plan and DRP	C	2	0	-
ICIT420C	COBIT	C	2	0	-
MIBM420C	International Business Management	C	2	0	-
	Elective - 3 (from group of Elective-1)	E	2	0	-
	Elective - 4 (from group of Elective-1)	E	2	0	-
	Elective - 5 (from group of Elective-2)	E	2	0	-
	Elective - 6 (from group of Elective-2)	E	2	0	-
MSTP406P	Mini Project based on Ph.D. Topic (R) / Master Project (PG)	P	0	6	-
<b>ELECTIVES</b>					
MASM320E	(G1) Advertising and Socioal Media Strategy	E	2	0	MMRM220C
MMOS320E	(G1) Marketing of Services	E	2	0	MMRM220C
MDGM320E	(G1) Digital Marketing	E	2	0	MMRM220C

MTPF320E	(G2) Tax Planning and Financial Reporting	E	2	0	-
MSPM320E	(G2) Security Analysis and Portfolio Management	E	2	0	MFNM220C
MFAR320E	(G2) Financial Auditing and Reporting	E	2	0	-
MPML320E	(G3) Procurement Management and E-Logistics	E	2	0	MOPM220C
MOSM320E	(G3) Operation, Strategic Cost Management	E	2	0	MOPM220C
MQAC320E	(G3) Quality Assurance and Control	E	2	0	MOPM220C
ISE0320E	(G4) Search Engine Optimization	E	2	0	-
IRVT320E	(G4) Risk Vulnerability and Physical Assessment	E	2	0	-
IFIS320E	(G4) Fundamentals of Information Security	E	2	0	-
MEIL320E	(G5) Emotional Intelligence and Leadership	E	2	0	MHRM220C
MEBB320E	(G5) Employer Brand Building	E	2	0	MHRM220C
MRTM420E	(G1) Retail Management	E	2	0	Sem-3 G1 elect.
MITM420E	(G1) International Marketing	E	2	0	Sem-3 G1 elect.
MIDM420E	(G1) Industrial Marketing	E	2	0	Sem-3 G1 elect.
MKAM420E	(G1) Business Marketing and Key Account Management	E	2	0	Sem-3 G1 elect.
MTLM420E	(G1) Telecommunication Marketing	E	2	0	Sem-3 G1 elect.
MCBC420E	(G1) Consumer Behavior and CRM	E	2	0	Sem-3 G1 elect.
MFIE420E	(G2) Financial Engineering	E	2	0	Sem-3 G2 elect.
MEAA420E	(G2) Environment Analysis Accounting	E	2	0	Sem-3 G2 elect.
MIFM420E	(G2) International Financial Management	E	2	0	Sem-3 G2 elect.
MFIS420E	(G2) Management of Financial Institutions and Services	E	2	0	Sem-3 G2 elect.
MACM420E	(G2) Merger, Acquisition and Corporate Restructuring	E	2	0	Sem-3 G2 elect.
MRKM420E	(G2) Risk Management	E	2	0	Sem-3 G2 elect.
MPRM420E	(G3) Project Management	E	2	0	Sem-3 G3 elect.
MKNM420E	(G3) Knowledge Management	E	2	0	Sem-3 G3 elect.
MTQM420E	(G3) Total Quality Management	E	2	0	Sem-3 G3 elect.
SMMD420E	(G3) Mathematical Models for Management Decisions	E	2	0	Sem-3 G3 elect.
MMIC420E	(G3) Material Management and Inventory Control	E	2	0	Sem-3 G3 elect.
IESD420E	(G4) Expert System Design and Applications	E	2	0	Sem-3 G4 elect.
ISSE420E	(G4) System Analysis and Design and Software Engineering	E	2	0	Sem-3 G4 elect.
ISPM420E	(G4) Software Project Management	E	2	0	Sem-3 G4 elect.
IICC420E	(G4) Information Strategy and Cloud Computing	E	2	0	Sem-3 G4 elect.
MSRM420E	(G5) Strategic HRM	E	2	0	Sem-3 G5 elect.
MCRI420E	(G5) Creativity and Innovation	E	2	0	Sem-3 G5 elect.
MTRD420E	(G5) Training and Development	E	2	0	Sem-3 G5 elect.

Table 3.27: Curriculum of MBA (IT): 2014-16

## 4. Dual Degree B.Tech - M.Tech/MBA Programmes

The following courses are part of Postgraduate programmes offered at IIIT Allahabad.

### 4.1 Dual Degree B.Tech (IT) - M.Tech IT (BI)

The curricula for Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Bioinformatics is as follows:

#### 4.1.1 B.Tech (IT) - M.Tech IT (BI): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	SEMESTER - 1 (same as B.Tech (IT) Sem - 1)				
	SEMESTER - 2 (same as B.Tech (IT) Sem - 2)				
	SEMESTER - 3 (same as B.Tech (IT) Sem - 3)				
	SEMESTER - 4 (same as B.Tech (IT) Sem - 4)				
	SEMESTER - 5 (same as B.Tech (IT) Sem - 5)				
	SEMESTER - 6 (same as B.Tech (IT) Sem - 6)				
IPRJ710P	PROJECT Project	P	0	10	-
	SEMESTER - 7				
SOMI732C	Omics - I	C	3	2	-
SBDA732C	Biological data analytics	C	3	2	-
SBIS732C	Biological Information System and Management	C	3	2	-
SSCE732C	Scripting and Computer Environments	C	3	2	-
	SEMESTER - 8				
IPHS820C	Philosophy of Science	C	2	0	-
S0II832C	Omics - II	C	3	2	-

SNGS832C	Next Generation Sequencing Tools and Algorithms	C	3	2	-
SCIM832C	Cheminformatics and Molecular modeling	C	3	2	-
SMSP832C	Molecular Structure Prediction	C	3	2	-
<b>RESEARCH PROJECT</b>					
IRES910P	Research Project	P	0	10	-
<b>SEMESTER - 9</b>					
Elective - 1					
Elective - 2					
ITHS912P	M.Tech Thesis	P	0	12	-
<b>SEMESTER - 10</b>					
ITHSX20P	Thesis work	P	0	20	-
<b>ELECTIVES</b>					
SMLB331E	Machine Learning in Biological Systems	E	3	1	-
SMMD331E	Molecular Medicine	E	3	1	-
SBIP331E	Biological Imaging and Processing	E	3	1	-
SCNS331E	Computational Neurosciences	E	3	1	-
SBAN331E	Big-data Analytics	E	3	1	-

Table 4.1: Curriculum of B.Tech (IT) - M.Tech IT (BI): 2016-21

#### 4.1.2 B.Tech (IT) - M.Tech IT (BI): 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
(same as B.Tech (IT) Sem - 1)					
<b>SEMESTER - 2</b>					
(same as B.Tech (IT) Sem - 2)					
<b>SEMESTER - 3</b>					
(same as B.Tech (IT) Sem - 3)					
<b>SEMESTER - 4</b>					
(same as B.Tech (IT) Sem - 4)					
<b>SEMESTER - 5</b>					
(same as B.Tech (IT) Sem - 5)					
<b>SEMESTER - 6</b>					
(same as B.Tech (IT) Sem - 6)					
<b>PROJECT</b>					
IPRJI10P	Project	P	0	10	-
<b>SEMESTER - 7</b>					
SOMI732C	Omics - I	C	3	2	-
SBDA732C	Biological data analytics	C	3	2	-
SBIS732C	Biological Information System and Management	C	3	2	-
SSCE732C	Scripting and Computer Environments	C	3	2	-
<b>SEMESTER - 8</b>					

IPHS820C	Philosophy of Science	C	2	0	-
SOI1832C	Omics - II	C	3	2	-
SNGS832C	Next Generation Sequencing Tools and Algorithms	C	3	2	-
SCIM832C	Cheminformatics and Molecular modeling	C	3	2	-
SMSP832C	Molecular Structure Prediction	C	3	2	-
<b>RESEARCH PROJECT</b>					
IRESJ10P	Research Project	P	0	10	-
<b>SEMESTER - 9</b>					
Elective - 1					
Elective - 2					
ITHS912P	M.Tech Thesis	P	0	12	-
<b>SEMESTER - 10</b>					
ITHSX20P	Thesis work	P	0	20	-
<b>ELECTIVES</b>					
SMLB932C	Machine Learning in Biological System	C	3	2	-
SMMD932C	Molecular Medicine	C	3	2	-
SBIP932C	Biological Imaging and Processing	C	3	2	-
SCNS932C	Computational Neurosciences	C	3	2	-
SBAN932C	Big-data Analytics	C	3	2	-

Table 4.2: Curriculum of B.Tech (IT) - M.Tech IT (BI): 2015-20

#### 4.1.3 B.Tech (IT) - M.Tech IT (BI): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
(same as B.Tech (IT) Sem - 1)					
<b>SEMESTER - 2</b>					
(same as B.Tech (IT) Sem - 2)					
<b>SEMESTER - 3</b>					
(same as B.Tech (IT) Sem - 3)					
<b>SEMESTER - 4</b>					
(same as B.Tech (IT) Sem - 4)					
<b>SEMESTER - 5</b>					
(same as B.Tech (IT) Sem - 5)					
<b>SEMESTER - 6</b>					
(same as B.Tech (IT) Sem - 6)					
<b>PROJECT</b>					
IPRJI10P	Project	P	0	10	-
<b>SEMESTER - 7</b>					
SOMI732C	Omics - I	C	3	2	-
SBDA732C	Biological data analytics	C	3	2	-
SBIS732C	Biological Information System and Management	C	3	2	-
SSCE732C	Scripting and Computer Environments	C	3	2	-



	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
SOI1832C	Omics - II	C	3	2	-
SNGS832C	Next Generation Sequencing Tools and Algorithms	C	3	2	-
SCIM832C	Cheminformatics and Molecular modeling	C	3	2	-
SMSP832C	Molecular Structure Prediction	C	3	2	-
	<b>RESEARCH PROJECT</b>				
IRESJ10P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
ITHS912P	M.Tech Thesis	P	0	12	-
	<b>SEMESTER - 10</b>				
ITHSX20P	Thesis work	P	0	20	-
	<b>ELECTIVES</b>				
SMLB932C	Machine Learning in Biological System	C	3	2	-
SMMD932C	Molecular Medicine	C	3	2	-
SBIP932C	Biological Imaging and Processing	C	3	2	-
SCNS932C	Computational Neurosciences	C	3	2	-
SBAN932C	Big-data Analytics	C	3	2	-

Table 4.3: Curriculum of B.Tech (IT) - M.Tech IT (BI): 2014-19

## 4.2 Dual Degree B.Tech (IT) - M.Tech IT (CLIS)

The curricula for Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Cyber Laws and Information Security is as follows:

### 4.2.1 B.Tech (IT) - M.Tech IT (CLIS): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>PROJECT</b>				

IPRJ710P	Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
IINP740C	Internet Protocols	C	4	0	-
ICRP740C	Introduction to Cryptography	C	4	0	-
	<b>SEMESTER - 8</b>				
ICLS840C	Cyber Laws & Security Standards	C	4	0	-
INSE840C	Network Security	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS840E	Mobile and Wireless Security	E	4	0	-
ICFN840E	Computer Forensics	E	4	0	-
ISAC840E	Security Architecture	E	4	0	-
ITRA840E	Technical Risk Assessment	E	4	0	-
ISSE840E	Software Security	E	4	0	-
IISA840E	Information Security Audit	E	4	0	-
IIAM840E	Identity and Access Management	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IDBS940E	Database Security	E	4	0	-
IOSS940E	Operating System Security	E	4	0	-
IBCP940E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA940E	Security Audit	E	4	0	-
ICVS940E	Cloud and Virtualization Security	E	4	0	-
IISP940E	Information and Information System Privacy	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.4: Curriculum of B.Tech (IT) - M.Tech IT (CLIS): 2016-21

#### 4.2.2 B.Tech (IT) - M.Tech IT (CLIS): 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				

	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>PROJECT</b>				
IPRJ710P	Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IINP740C	Internet Protocols	C	4	0	-
ICRP740C	Introduction to Cryptography	C	4	0	-
ICLS740C	Cyber Laws and Security Standards	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
IADC840C	Advanced Cryptography	C	4	0	-
INSE840C	Network Security	C	4	0	-
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS840E	Mobile and Wireless Security	E	4	0	-
ICFN840E	Computer Forensics	E	4	0	-
ISAC840E	Security Architecture	E	4	0	-
ITRA840E	Technical Risk Assessment	E	4	0	-
ISSE840E	Software Security	E	4	0	-
IISA840E	Information Security Audit	E	4	0	-
IIAM840E	Identity and Access Management	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDBS940E	Database Security	E	4	0	-
IOSS940E	Operating System Security	E	4	0	-
IBCP940E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA940E	Security Audit	E	4	0	-
ICVS940E	Cloud and Virtualization Security	E	4	0	-
IISP940E	Information and Information System Privacy	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.5: Curriculum of B.Tech (IT) - M.Tech IT (CLIS): 2015-20

## 4.2.3 B.Tech (IT) - M.Tech IT (CLIS): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IINP740C	Internet Protocols	C	4	0	-
ICRP740C	Introduction to Cryptography	C	4	0	-
ICLS740C	Cyber Laws and Security Standards	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
IADC840C	Advanced Cryptography	C	4	0	-
INSE840C	Network Security	C	4	0	-
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
	M.Tech Thesis	P	12	0	-
ITHSX20P	<b>SEMESTER - 10</b> M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS840E	Mobile and Wireless Security	E	4	0	-
ICFN840E	Computer Forensics	E	4	0	-
ISAC840E	Security Architecture	E	4	0	-

ITRA840E	Technical Risk Assessment	E	4	0	-
ISSE840E	Software Security	E	4	0	-
IISA840E	Information Security Audit	E	4	0	-
IIAM840E	Identity and Access Management	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDBS940E	Database Security	E	4	0	-
IOSS940E	Operating System Security	E	4	0	-
IBCP940E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA940E	Security Audit	E	4	0	-
ICVS940E	Cloud and Virtualization Security	E	4	0	-
IISP940E	Information and Information System Privacy	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.6: Curriculum of B.Tech (IT) - M.Tech IT (CLIS): 2014-19

### 4.3 Dual Degree B.Tech (IT) - M.Tech IT (HCI)

The curricula for the Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Human Computer Interaction is as follows:

#### 4.3.1 B.Tech (IT) - M.Tech IT (HCI): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
ICCP740C	Cognition and Cognitive Process Modelling	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
	<b>SEMESTER - 8</b>				
IIVP840C	Image and Video Processing	C	4	0	-
IAGA840C	Advanced Graphics and Animation	C	4	0	-
	Elective - 1	E	4	0	-

	Elective - 2	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b>				
	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IADM840E	Advanced Database Management System	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
ISCO830E	Soft Computing	E	3	0	-
IDSS840E	Distributed Systems	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IDCO940E	Data Compression	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-

Table 4.7: Curriculum of B.Tech (IT) - M.Tech IT (HCI): 2016-21

#### 4.3.2 B.Tech (IT) - M.Tech IT (HCI): 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b>				
	Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
ICCP740C	Cognition and Cognitive Process Modelling	C	4	0	-

ICII740C	Computational Intelligence	C	4	0	-
IPID740C	Principles of Interaction Design	C	4	0	-
<b>SEMESTER - 8</b>					
IPHS820C	Philosophy of Science	C	2	0	-
IIVP840C	Image and Video Processing	C	4	0	-
IAGA840C	Advanced Graphics and Animation	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>RESEARCH PROJECT</b>					
IRES910P	Research Project	P	0	10	-
<b>SEMESTER - 9</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 10</b>					
ITHSX20P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IADM840E	Advanced Database Management System	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
ISCO830E	Soft Computing	E	3	0	-
IDSS840E	Distributed Systems	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IDCO940E	Data Compression	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-

Table 4.8: Curriculum of B.Tech (IT) - M.Tech IT (HCI): 2015-20

### 4.3.3 B.Tech (IT) - M.Tech IT (HCI): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				

IPRJ710P	PROJECT Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
ICCP740C	Cognition and Cognitive Process Modelling	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
IPID740C	Principles of Interaction Design	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
IIVP840C	Image and Video Processing	C	4	0	-
IAGA840C	Advanced Graphics and Animation	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
I00T630E	Optimization Techniques	E	3	0	SMAT130C SMAT330C
ICSE630E	Control System Engineering	E	3	0	SMAT430C
INLP630E	Natural Language Processing	E	3	0	-
ISCO630E	Soft Computing	E	3	0	-
IMCL630E	Machine Learning - Tools and Techniques	E	3	0	-
IRIA630E	Robotics and Industrial Automation	E	3	0	-
INSE630E	Network Security	E	3	0	-
IWBT623E	Web Technologies	E	3	0	-
IADM840E	Advanced Database Management System	E	4	0	-
ISKD840E	Software for Data and Knowledge Engineering	E	4	0	-
ISOC840E	Soft Computing	E	4	0	-
IDSS840E	Distributed Systems	E	4	0	-
IIPR940E	Intellectual Property Rights	E	4	0	IIPR340E
IINR940E	Information Retrieval	E	4	0	IINR340E
ICVI940E	Computer Vision	E	4	0	ICVI340E

Table 4.9: Curriculum of B.Tech (IT) - M.Tech IT (HCI): 2014-19

## 4.4 Dual Degree B.Tech (IT) - M.Tech IT (IS)

The curricula for Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Intelligent Systems is as follows:

### 4.4.1 B.Tech (IT) - M.Tech IT (IS): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
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	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
ICCP740C	Cognition and Cognitive Process Modelling	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
IALS840C	<b>SEMESTER - 8</b> Artificial Life Simulation	C	4	0	-
IIVP840C	Image and Video Processing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
ITHSX20P	<b>SEMESTER - 10</b> M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IDSD840E	Digital System Design	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
IADM840E	Advanced Database Management System	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-

Table 4.10: Curriculum of B.Tech (IT) - M.Tech IT (IS): 2016-21

#### 4.4.2 B.Tech (IT) - M.Tech IT (IS): 2015-20

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IPSP740C	Probability and Stochastic Processes	C	4	0	-
ICCP740C	Cognition and Cognitive Process Modelling	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
IPHS820C	<b>SEMESTER - 8</b> Philosophy of Science	C	2	0	-
ISOC840C	Soft Computing	C	4	0	-
IIVP840C	Image and Video Processing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
ITHSX20P	<b>SEMESTER - 10</b> M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IDSD240E	Digital System Design	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-

IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-

Table 4.11: Curriculum of B.Tech (IT) - M.Tech IT (IS): 2015-20

#### 4.4.3 B.Tech (IT) - M.Tech IT (IS): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJI10P	<b>PROJECT</b> Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IPSP740C	Probability and Stochastic Processes	C	4	0	-
ICCP740C	Cognition and Cognitive Process Modelling	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
ISOC840C	Soft Computing	C	4	0	-
IIVP840C	Image and Video Processing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRESJ10P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				

IDSD840E	Digital System Design	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
IADM840E	Advanced Database Management System	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-

Table 4.12: Curriculum of B.Tech (IT) - M.Tech IT (IS): 2014-19

## 4.5 Dual Degree B.Tech (IT) - M.Tech IT (RO)

The curricula for Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Robotics is as follows:

### 4.5.1 B.Tech (IT) - M.Tech IT (RO): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
ICSE740C	Control System Engineering	C	4	0	-
IMFR740C	Mathematical Foundation of Robotics	C	4	0	-
	<b>SEMESTER - 8</b>				
IALS840C	Artificial Life simulation	C	4	0	-
ISC0840C	Soft Computing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-

	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IIVP840E	Image and Video processing	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDSS840E	Distributed Systems	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IRMP940E	Robot Motion Planning	E	4	0	-

Table 4.13: Curriculum of B.Tech (IT) - M.Tech IT (RO): 2016-21

#### 4.5.2 B.Tech (IT) - M.Tech IT (RO): 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMFR740C	Mathematical Foundation of Robotics	C	4	0	-
ICSE740C	Control System Engineering	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
IPHS820C	<b>SEMESTER - 8</b> Philosophy of Science	C	2	0	-

IALS840C	Artificial Life simulation	C	4	0	-
ISC0840C	Soft Computing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IIVP840E	Image and Video processing	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDSS840E	Distributed Systems	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IRMP940E	Robot Motion Planning	E	4	0	-

Table 4.14: Curriculum of B.Tech (IT) - M.Tech IT (RO): 2015-20

#### 4.5.3 B.Tech (IT) - M.Tech IT (RO): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>PROJECT</b>				
IPRJ710P	Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C

MORB720C	Organizational Behaviour	C	2	0	-
IMFR740C	Mathematical Foundation of Robotics	C	4	0	-
ICSE740C	Control System Engineering	C	4	0	-
ICII740C	Computational Intelligence	C	4	0	-
<b>SEMESTER - 8</b>					
IPHS820C	Philosophy of Science	C	2	0	-
IALS840C	Artificial Life simulation	C	4	0	-
ISCO840C	Soft Computing	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>RESEARCH PROJECT</b>					
IRES910P	Research Project	P	0	10	-
<b>SEMESTER - 9</b>					
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
<b>SEMESTER - 10</b>					
ITHSX20P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IIVP840E	Image and Video processing	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDSS840E	Distributed Systems	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IDCO940E	Data Compression	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IRMP940E	Robot Motion Planning	E	4	0	-

Table 4.15: Curriculum of B.Tech (IT) - M.Tech IT (RO): 2014-19

#### 4.5.4 B.Tech (IT) - M.Tech IT (RO): 2013-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b>				

	(same as B.Tech (IT) Sem - 6)				
IPRJI10P	<b>PROJECT</b> Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
IMFR740C	Mathematical Foundation of Robotics	C	4	0	-
ECSE740C	Control System Engineering	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
IALS840C	Artificial Life simulation	C	4	0	-
ISCO840C	Soft Computing	C	4	0	-
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRESJ10P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 5	E	4	0	-
	Elective - 6	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IIVP840E	Image and Video processing	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
IDSS840E	Distributed Systems	E	4	0	-
IHUR940E	Humanoid Robotics	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
IDCO940E	Data Compression	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-
IRMP940E	Robot Motion Planning	E	4	0	-

Table 4.16: Curriculum of B.Tech (IT) - M.Tech IT (RO): 2013-18

## 4.6 Dual Degree B.Tech (IT) - M.Tech IT (SE)

The curricula for Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Software Engineering is as follows:

### 4.6.1 B.Tech (IT) - M.Tech IT (SE): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b>				



	(same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>PROJECT</b>				
IPRJ710P	Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
ISOM740C	Software Metrics	C	4	0	-
ISRE740C	Software Requirements and Estimation	C	4	0	-
	<b>SEMESTER - 8</b>				
ISTQ840C	Software Testing and Quality Management	C	4	0	-
IASS840C	Architecture of Software Systems	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IERP840E	Enterprise Resource Planning	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
IADM840E	Advanced Database Management System	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
ICCS940E	Cognition and Cognitive Process Modelling	E	4	0	-
IMDM940E	Mobile Data Management	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
ICIS940E	Cryptography and Information Security	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.17: Curriculum of B.Tech (IT) - M.Tech IT (SE): 2016-21

#### 4.6.2 B.Tech (IT) - M.Tech IT (SE): 2015-20

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IOOS740C	Object Oriented Software Engineering	C	4	0	-
ISOM740C	Software Metrics	C	4	0	-
ISRE740C	Software Requirements and Estimation	C	4	0	-
IPHS820C	<b>SEMESTER - 8</b> Philosophy of Science	C	2	0	-
ISTQ840C	Software Testing and Quality Management	C	4	0	-
IASS840C	Architecture of Software Systems	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
ITHSX20P	<b>SEMESTER - 10</b> M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IERP840E	Enterprise Resource Planning	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
IADM840E	Advanced Database Management System	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IDC0940E	Data Compression	E	4	0	-

IINR940E	Information Retrieval	E	4	0	-
ICCS940E	Cognition and Cognitive Process Modelling	E	4	0	-
IMDM940E	Mobile Data Management	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
ICIS940E	Cryptography and Information Security	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.18: Curriculum of B.Tech (IT) - M.Tech IT (SE): 2015-20

#### 4.6.3 B.Tech (IT) - M.Tech IT (SE): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
ISOM740C	Software Metrics	C	4	0	-
ISRE740C	Software Requirements and Estimation	C	4	0	-
IPHS820C	<b>SEMESTER - 8</b> Philosophy of Science	C	2	0	-
ISTQ840C	Software Testing and Quality Management	C	4	0	-
IASS840C	Architecture of Software Systems	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
IRESJ10P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				

ITHSX20P	M.Tech Thesis	P	20	0	-
<b>ELECTIVES</b>					
IERP840E	Enterprise Resource Planning	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
IADM840E	Advanced Database Management System	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
ICCS940E	Cognition and Cognitive Process Modelling	E	4	0	-
IMDM940E	Mobile Data Management	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
ICIS940E	Cryptography and Information Security	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.19: Curriculum of B.Tech (IT) - M.Tech IT (SE): 2014-19

#### 4.6.4 B.Tech (IT) - M.Tech IT (SE): 2013-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJI10P	<b>PROJECT</b> Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
ISOM740C	Software Metrics	C	4	0	-
ISRE740C	Software Requirements and Estimation	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
ISTQ840C	Software Testing and Quality Management	C	4	0	-
IASS840C	Architecture of Software Systems	C	4	0	-
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-

	<b>RESEARCH PROJECT</b>				
IRESJ10P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 5	E	4	0	-
	Elective - 6	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IERP840E	Enterprise Resource Planning	E	4	0	-
IDMW840E	Data Mining and Warehousing	E	4	0	-
IADM840E	Advanced Database Management System	E	4	0	-
IEMB940E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IINR940E	Information Retrieval	E	4	0	-
ICCS940E	Cognition and Cognitive Process Modelling	E	4	0	-
IMDM940E	Mobile Data Management	E	4	0	-
IVIR940E	Virtual Reality	E	4	0	-
ICIS940E	Cryptography and Information Security	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.20: Curriculum of B.Tech (IT) - M.Tech IT (SE): 2013-18

## 4.7 Dual Degree B.Tech (IT) - M.Tech IT (WCE)

The curricula for Dual Degree with Bachelor of Technology in IT and Master of Technology in IT with specialization in Wireless and Communication Engineering is as follows:

### 4.7.1 B.Tech (IT) - M.Tech IT (WCE): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>PROJECT</b>				
IPRJ710P	Project	P	0	10	-

	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IMIT740C	Mathematics for IT	C	4	0	-
IINP740C	Internet Protocols	C	4	0	-
EWCS740C	Wireless Communications	C	4	0	-
	<b>SEMESTER - 8</b>				
EWNS840C	Wireless Networks	C	4	0	-
IGRT840C	Graph Theory	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
EDSP240E	Digital Signal Processing	E	4	0	-
ISDK240E	Software for Data and Knowledge Engineering	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
EODC340E	Optoelectronic Devices and Circuits	E	4	0	-
ERSE340E	Radar and Satellite Communication	E	4	0	-
EMIM340E	MIMO Communication	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
EOPN340E	Optical Networks	E	4	0	-
IESE340E	Embedded Software Engineering	E	4	0	-

Table 4.21: Curriculum of B.Tech (IT) - M.Tech IT (WCE): 2016-21

#### 4.7.2 B.Tech (IT) - M.Tech IT (WCE): 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				

	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>PROJECT</b>				
IPRJ710P	Project	P	0	10	-
	<b>SEMESTER - 7</b>				
ISIM732C	System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IINP740C	Internet Protocols	C	4	0	-
EWCS740C	Wireless Communications	C	4	0	-
IPSP740C	Probability and Stochastic Processes	C	4	0	-
	<b>SEMESTER - 8</b>				
IPHS820C	Philosophy of Science	C	2	0	-
EWNS840C	Wireless Networks	C	4	0	-
IGRT840C	Graph Theory	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>RESEARCH PROJECT</b>				
IRES910P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b>				
	Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
	<b>SEMESTER - 10</b>				
ITHSX20P	M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS840E	Mobile and Wireless Security	E	4	0	-
EOCN840E	Optical Communication	E	4	0	-
IDSS840E	Distributed Systems	E	4	0	-
EITC840E	Information Theory and Coding	E	04	0	-
ISCO840E	Soft Computing	E	4	0	-
EARD840E	Antenna and RF Design	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
EDSP840E	Digital Signal Processing	E	4	0	-
IDCO940E	Data Compression	E	4	0	-
IMDM940E	Mobile Data Management	E	4	0	-
ICIS940E	Cryptography and Information Security	E	4	0	-
EODC940E	Optoelectronic Devices and Circuits	E	4	0	-
ERSE940E	Radar and Satellite Communication	E	4	0	-
EMIM940E	MIMO Communication	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.22: Curriculum of B.Tech (IT) - M.Tech IT (WCE): 2015-20

### 4.7.3 B.Tech (IT) - M.Tech IT (WCE): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
IPRJ710P	<b>PROJECT</b> Project	P	0	10	-
ISIM732C	<b>SEMESTER - 7</b> System Modeling and Simulation	C	3	2	SPAS230C
MORB720C	Organizational Behaviour	C	2	0	-
IINP740C	Internet Protocols	C	4	0	-
EWCS740C	Wireless Communications	C	4	0	-
IPSP740C	Probability and Stochastic Processes	C	4	0	-
IPHS820C	<b>SEMESTER - 8</b> Philosophy of Science	C	2	0	-
EWNS840C	Wireless Networks	C	4	0	-
IGRT840C	Graph Theory	C	4	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
IRES910P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> Elective - 3	E	4	0	-
	Elective - 4	E	4	0	-
ITHS912P	M.Tech Thesis	P	12	0	-
ITHSX20P	<b>SEMESTER - 10</b> M.Tech Thesis	P	20	0	-
	<b>ELECTIVES</b>				
IMWS840E	Mobile and Wireless Security	E	4	0	-
EOCN840E	Optical Communication	E	4	0	-



IDSS840E	Distributed Systems	E	4	0	-
EITC840E	Information Theory and Coding	E	04	0	-
ISC0840E	Soft Computing	E	4	0	-
EARD840E	Antenna and RF Design	E	4	0	-
IWSN840E	Wireless Sensor Networks	E	4	0	-
EDSP840E	Digital Signal Processing	E	4	0	-
IDC0940E	Data Compression	E	4	0	-
IMDM940E	Mobile Data Management	E	4	0	-
ICIS940E	Cryptography and Information Security	E	4	0	-
EODC940E	Optoelectronic Devices and Circuits	E	4	0	-
ERSE940E	Radar and Satellite Communication	E	4	0	-
EMIM940E	MIMO Communication	E	4	0	-
IMOC940E	Mobile Computing	E	4	0	-

Table 4.23: Curriculum of B.Tech (IT) - M.Tech IT (WCE): 2014-

19

## 4.8 Dual Degree B.Tech (ECE) - M.Tech ECE (MI)

The curricula for Dual Degree with Bachelor of Technology in ECE and Master of Technology in ECE with specialization in Microelectronics is as follows:

### 4.8.1 B.Tech (ECE) - M.Tech ECE (MI): 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
EPRJI10P	<b>PROJECT</b> Project	P	0	10	-
	<b>SEMESTER - 7</b> (The following in addition to all the M.Tech (MI) Sem - 1 courses)				
EESD740C	Embedded System Design	C	4	0	-
EWCN732C	Wireless Communication	C	3	2	-
	<b>SEMESTER - 8</b> (same as M.Tech (MI) Sem - 2)				
	<b>RESEARCH PROJECT</b>				

ERESJ10P	Research Project	P	0	10	-
	<b>SEMESTER - 9</b> (same as M.Tech (MI) Sem - 3)				
	<b>SEMESTER - 10</b> (same as M.Tech (MI) Sem - 4)				

Table 4.24: Curriculum of B.Tech (ECE) - M.Tech ECE (MI): 2016-21

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. More electives may be offered based on the availability of faculty.

#### 4.8.2 B.Tech (ECE) - M.Tech ECE (MI): 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
EPRJI10P	<b>PROJECT</b> Project	P	0	10	-
	<b>SEMESTER - 7</b> (The following in addition to all the M.Tech (MI) Sem - 1 courses)				
EESD740C	Embedded System Design	C	4	0	-
EWCN732C	Wireless Communication	C	3	2	-
	<b>SEMESTER - 8</b> (same as M.Tech (MI) Sem - 2)				
ERESJ10P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> (same as M.Tech (MI) Sem - 3)				

	<b>SEMESTER - 10</b> (same as M.Tech (MI) Sem - 4)				
	<b>ELECTIVES</b>				
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPAS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	-

Table 4.25: Curriculum of B.Tech (ECE) - M.Tech ECE (MI):  
2015-20

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. More electives may be offered based on the availability of faculty.

#### 4.8.3 B.Tech (ECE) - M.Tech ECE (MI): 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
EPRJI10P	<b>PROJECT</b> Project	P	0	10	-
	<b>SEMESTER - 7</b> (The following in addition to all the M.Tech (MI) Sem - 1 courses)				
EESD740C	Embedded System Design	C	4	0	-
EWCN732C	Wireless Communication	C	3	2	-
	<b>SEMESTER - 8</b> (same as M.Tech (MI) Sem - 2)				
ERESJ10P	<b>RESEARCH PROJECT</b> Research Project	P	0	10	-
	<b>SEMESTER - 9</b> (same as M.Tech (MI) Sem - 3)				
	<b>SEMESTER - 10</b>				

	(same as M.Tech (MI) Sem - 4)				
	<b>ELECTIVES</b>				
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPAS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	-

Table 4.26: Curriculum of B.Tech (ECE) - M.Tech ECE (MI): 2014-19

Note:

1. Prerequisites for electives would be decided by the faculty members offering the course.
2. More electives may be offered based on the availability of faculty.

## 4.9 Dual Degree B.Tech (ECE) - M.Tech BME

The curricula for Dual Degree with Bachelor of Technology in ECE and Master of Technology in ECE with specialization in Biomedical Engineering is as follows:

### 4.9.1 B.Tech (ECE) - M.Tech BME: 2016-21

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
	<b>SEMESTER - 7-10</b> (To be approved)				
	<b>ELECTIVES</b>				
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPAS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	-

Table 4.27: Curriculum of B.Tech (ECE) - M.Tech BME: 2016-21

### 4.9.2 B.Tech (ECE) - M.Tech BME: 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
	<b>SEMESTER - 7-10</b> (To be approved)				
	<b>ELECTIVES</b>				
EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPAS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	-

Table 4.28: Curriculum of B.Tech (ECE) - M.Tech BME: 2015-20

#### 4.9.3 B.Tech (ECE) - M.Tech BME: 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
	<b>SEMESTER - 7-10</b> (To be approved)				
	<b>ELECTIVES</b>				

EPES630E	Power Electronics	E	3	0	EEDC132C
EITC630E	Information Theory and Coding	E	3	0	SPAS230C ESAS430C
IDPM632E	Database Programming and Management	E	3	0	-

Table 4.29: Curriculum of B.Tech (ECE) - M.Tech BME: 2014-19

#### 4.9.4 B.Tech (IT) - MBA: 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>SEMESTER - 7</b>				
MORB720C	Organizational Behaviour	C	2	0	-
MFA720C	Financial Accounting	C	2	0	-
MBUE720C	Business Environment	C	2	0	-
MBUL720C	Business Law	C	2	0	-
	<b>SEMESTER - 8</b>				
MPMC820C	Process Management and Consulting	C	2	0	-
MFNM820C	Financial Management	C	2	0	-
MHRM820C	Human Resource Management	C	2	0	-
MOPM820C	Operations and Production Management	C	2	0	-
MMRM820C	Marketing Management	C	2	0	-
	<b>SEMESTER - 9</b> (same as MBA Sem - 3 with MREM922C in place of MORB302C)				
MREM922C	Research Methodology	C	2	2	-
	<b>SEMESTER - 10</b> (same as MBA Sem - 4)				

Table 4.30: Curriculum of B.Tech (IT) - MBA: 2015-20

#### 4.9.5 B.Tech (IT) - MBA: 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
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	<b>SEMESTER - 1</b> (same as B.Tech (IT) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (IT) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (IT) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (IT) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (IT) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (IT) Sem - 6)				
	<b>SEMESTER - 7</b>				
MORB720C	Organizational Behaviour	C	2	0	-
MFACT720C	Financial Accounting	C	2	0	-
MBUE720C	Business Environment	C	2	0	-
MBUL720C	Business Law	C	2	0	-
	<b>SEMESTER - 8</b>				
MPMC820C	Process Management and Consulting	C	2	0	-
MFNM820C	Financial Management	C	2	0	-
MHRM820C	Human Resource Management	C	2	0	-
MOPM820C	Operations and Production Management	C	2	0	-
MMRM820C	Marketing Management	C	2	0	-
	<b>SEMESTER - 9</b> (same as MBA Sem - 3 with MREM922C in place of MORB302C)				
MREM922C	Research Methodology	C	2	2	-
	<b>SEMESTER - 10</b> (same as MBA Sem - 4)				

Table 4.31: Curriculum of B.Tech (IT) - MBA: 2014-19

#### 4.9.6 B.Tech (ECE) - MBA: 2015-20

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				

	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
	<b>SEMESTER - 7</b>				
MORB720C	Organizational Behaviour	C	2	0	-
MFACT720C	Financial Accounting	C	2	0	-
MBUE720C	Business Environment	C	2	0	-
MBUL720C	Business Law	C	2	0	-
	<b>SEMESTER - 8</b>				
MPMC820C	Process Management and Consulting	C	2	0	-
MFNM820C	Financial Management	C	2	0	-
MHRM820C	Human Resource Management	C	2	0	-
MOPM820C	Operations and Production Management	C	2	0	-
	<b>SEMESTER - 9</b> (same as MBA Sem - 3 with MREM922C in place of MORB302C)				
MREM922C	Research Methodology	C	2	2	-
	<b>SEMESTER - 10</b> (same as MBA Sem - 4)				

Table 4.32: Curriculum of B.Tech (ECE) - MBA: 2015-20

#### 4.9.7 B.Tech (ECE) - MBA: 2014-19

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as B.Tech (ECE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as B.Tech (ECE) Sem - 2)				
	<b>SEMESTER - 3</b> (same as B.Tech (ECE) Sem - 3)				
	<b>SEMESTER - 4</b> (same as B.Tech (ECE) Sem - 4)				
	<b>SEMESTER - 5</b> (same as B.Tech (ECE) Sem - 5)				
	<b>SEMESTER - 6</b> (same as B.Tech (ECE) Sem - 6)				
	<b>SEMESTER - 7</b>				
MORB720C	Organizational Behaviour	C	2	0	-
MFACT720C	Financial Accounting	C	2	0	-
MBUE720C	Business Environment	C	2	0	-
MBUL720C	Business Law	C	2	0	-



	<b>SEMESTER - 8</b>				
MPMC820C	Process Management and Consulting	C	2	0	-
MFNM820C	Financial Management	C	2	0	-
MHRM820C	Human Resource Management	C	2	0	-
MOPM820C	Operations and Production Management	C	2	0	-
	<b>SEMESTER - 9</b> (same as MBA Sem - 3 with MREM922C in place of MORB302C)				
MREM922C	Research Methodology	C	2	2	-
	<b>SEMESTER - 10</b> (same as MBA Sem - 4)				

Table 4.33: Curriculum of B.Tech (ECE) - MBA: 2014-19

## 5. Integrated M.Tech Programme

The following courses are part of Postgraduate programmes offered at IIIT Allahabad.

### 5.1 Integrated M.Tech (BME)

The curricula for Master of Technology in Biomedical Engineering is as follows:

#### 5.1.1 Integrated M.Tech (BME): 2013-18

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SPHY132C	Physics - I	C	3	2	-
EBEE132C	Electrical Engineering	C	3	2	-
SCHM132C	Chemistry - I	C	3	2	-
IITP132C	Introduction to Programming	C	3	2	-
SMAT130C	Mathematics - I	C	3	0	-
SBIS130C	Biological Systems - I	C	3	0	-
MLCS102C	Communication Skills - Lab I	C	0	2	-
EEWS102C	Electronics Workshop	C	0	2	-
<b>SEMESTER - 2</b>					
SBIS230C	Genetics and Evolution	C	3	0	-
SMAT230C	Mathematics - II	C	3	0	-
SPHY232C	Physics - II	C	3	2	-
MPOM230C	Principles of Management and Economics	C	2	0	-
EEDC232C	Electronic Devices and Circuits	C	3	2	-
SCHM232C	Chemistry - II	C	3	2	-
SAMP232C	Anatomy and Physiology	C	3	2	-
MLCS202C	Communication Skills - Lab II	C	0	2	-
<b>SEMESTER - 3</b>					
SDST332C	Data Structure and Algorithms	C	3	2	-
SAPM330C	Applied Mechanics	C	3	0	-
SBSS332C	Biosignal and System	C	3	2	-
SPHY332C	Physics - III	C	3	2	-
SCHM332C	Chemistry - III	C	3	2	-
EDEL332C	Digital Electronics	C	3	2	-
<b>SEMESTER - 4</b>					
EDCE432C	Digital Communication Engineering	C	3	2	-
SFMC431C	Fluid Mechanics	C	3	1	-
SCLB431C	Cellular Biology	C	3	1	-
SCPB432C	Chemical Process in Biological Systems	C	3	2	-
SEPB432C	Engineering Process in Biological Systems	C	3	2	-

EMPA432C	Microprocessors and Applications	C	3	2	-
	<b>SEMESTER - 5</b>				
SBIM532C	Biomedical Instrumentation	C	3	2	-
SCTB530C	Cellular Biology II (Cellular and Tissue Biomechanics)	C	3	0	-
IGVC532C	Computer Graphics	C	3	2	-
ECSY532C	Control Systems	C	3	2	-
SBAB530C	Biochemistry and Biomaterials	C	3	0	-
SPRJ505P	Mini Project	P	0	5	-
	<b>SEMESTER - 6</b>				
SAOR631C	Artificial Organs and Rehabilitative Engineering	C	3	1	-
SIIT632C	Intelligent Instrumentation	C	3	2	-
S BSP632C	Biosignal Processing	C	3	2	-
SBSM632C	Biological System Modeling and Simulation	C	3	2	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
SPRJ603P	Mini Project	P	0	3	-
	<b>SEMESTER - 7</b>				
SNAN731C	Nanotechnology	C	3	1	-
SMDS732C	Medical Imaging (Static)	C	3	2	-
SBST732C	Biostatistics	C	3	2	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
SPRJ708P	Mini Project	P	0	8	-
	<b>SEMESTER - 8</b>				
STLH832C	Telehealth	C	3	2	-
SMID832C	Medical Imaging - 2	C	3	2	-
SHMT822C	Hospital Management	C	2	2	-
	Elective - 5	E	3	0	-
	Elective - 6	E	3	0	-
SPRJ808P	Mini Project	P	0	8	-
	<b>SEMESTER - 9</b>				
SRSS931C	Regulatory Systems and Standards	C	3	1	-
SHCS931C	Health Care Systems	C	3	1	-
SNEU931C	Neural Engineering	C	3	1	-
	Elective - 7	E	3	0	-
SPRJ910P	Mini Project	P	0	10	-
	<b>SEMESTER - 10</b>				
SPRJX20P	Project	P	2	18	-
	<b>ELECTIVES</b>				
S DMB630E	Data Mining in Biological Systems	E	3	0	-
S BMM630E	Biomedical Micro-Electro-Mechanical Systems (Bio-MEMS)	E	3	0	-
SCAD630E	Computer Aided Drug Design	E	3	0	-
SBNT630E	Bio-nanotechnology	E	3	0	-
S DDS730E	Drug Delivery System	E	3	0	-
S BMT730E	Biomaterials	E	3	0	-
SBSN730E	Biosensors and Transducers	E	3	0	-
SAOR830E	Artificial Organs and Rehabilitative Engineering	E	3	0	-
SCTE830E	Cellular and Tissue Engineering	E	3	0	-
SNEU930E	Neural Engineering	E	3	0	-

SREG930E	Regulatory Systems and Standards	E	3	0	-
SHCS930E	Health Care Systems	E	3	0	-
SAOR930E	Artificial Organs and Rehabilitation Engineering - II	E	3	0	-
SMFL930E	Microfluidics: Physics and Applications	E	3	0	-
SBEL930E	Bioelectrics	E	3	01	-

Table 5.1: Curriculum of Int. M.Tech (BME): 2013-18

### 5.1.2 Integrated M.Tech (BME): 2012-17

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
SPHY132C	Physics - I	C	3	2	-
EBEE132C	Electrical Engineering	C	3	2	-
SCHM132C	Chemistry - I	C	3	2	-
IITP132C	Introduction to Programming	C	3	2	-
SMAT130C	Mathematics - I	C	3	0	-
SBIS130C	Biological Systems - I	C	3	0	-
MLCS102C	Communication Skills - I Lab	C	0	2	-
EEWS102C	Electronics Workshop	C	0	2	-
<b>SEMESTER - 2</b>					
SBIS203C	Biological Systems - II	C	3	0	-
SMAT230C	Mathematics - II	C	3	0	-
SPHY232C	Physics - II	C	3	2	-
MPOM230C	Principles of Management and Economics	C	2	0	-
EEBC232C	Electronic Devices and Circuits	C	3	2	-
SCHM231C	Chemistry - II	C	3	1	-
SANP232C	Anatomy and Physiology	C	3	2	-
MLCS201C	Communication Skills - II Lab	C	0	1	-
<b>SEMESTER - 3</b>					
SDST332C	Data Structure and Algorithms	C	3	2	-
SAPM330C	Applied Mechanics	C	3	0	-
SBFF332C	Biosignal and Systems	C	3	2	-
SPHY332C	Physics - III	C	3	2	-
SCHM332C	Chemistry - III	C	3	2	-
EDEL332C	Digital Electronics	C	3	2	-
<b>SEMESTER - 4</b>					
EDCE432C	Digital Communication System	C	3	2	-
SFMC432C	Fluid Mechanics	C	3	2	-
SCLB432C	Cellular Biology	C	3	2	-
SCPB432C	Chemical Process in Biological Systems	C	3	2	-
SEPB432C	Engineering Process in Biological Systems	C	3	2	-
EMPA432C	Microprocessors and Applications	C	3	2	-
<b>SEMESTER - 5</b>					
SBIM532C	Biomedical Instrumentation	C	3	2	-
SCTB530C	Cellular and Tissue Biomechanics	C	3	0	-
SBSM532C	Biological System Modeling	C	3	2	-
IGVC532C	Graphics and Visualization Computing	C	3	2	-
SBSE530C	Biomedical Science and Engineering	C	3	0	-
SBES531C	Biomedical Engineering Systems - I	C	3	1	-
SPRJ503P	Mini Project	P	0	3	-

	<b>SEMESTER - 6</b>				
SIIS632C	Intelligent Instrumentation System	C	3	2	-
S BSP632C	Biosignal Processing	C	3	2	-
SBSM632C	Biological Systems and Modelling - II	C	3	2	-
SBES632C	Bioengineering System - II	C	3	2	-
	Elective - 1	E	3	0	-
	Elective - 2	E	3	0	-
SPRJ605P	Mini Project	P	0	5	-
	<b>SEMESTER - 7</b>				
SMEI732C	Medical Imaging - I	C	3	2	-
SBSS730C	Bio Statistics	C	3	0	-
SNNT730C	Nanotechnology	C	3	0	-
	Elective - 3	E	3	0	-
	Elective - 4	E	3	0	-
	Elective - 5	E	3	0	-
SPRJ708P	Mini Project	P	0	8	-
	<b>SEMESTER - 8</b>				
STLH832C	Tele Health	C	3	2	-
SMID832C	Medical Imaging 2 (Dynamic)	C	3	2	-
SHMT832C	Hospital Management	C	3	2	-
	Elective - 6	E	3	0	-
	Elective - 7	E	3	0	-
SPRJ808P	Mini Project	P	0	8	-
	<b>SEMESTER - 9</b>				
SRSS931C	Regulatory Systems and Standards	C	3	1	-
SHCS931C	Health Care Systems	C	3	1	-
SNEU931C	Neural Engineering	C	3	1	-
	Elective - 8	E	3	0	-
SPRJ910P	Mini Project	P	0	10	-
	<b>SEMESTER - 10</b>				
SPRJX20P	Project	P	2	18	-
	<b>ELECTIVES</b>				
SNBT630E	Nano Biotech	E	3	0	-
SMSP630E	Molecular Structures Prediction and Visualization	E	3	0	-
SCAD630E	Computer -aided Drug Design	E	3	0	-
SBST630E	Biosensors and Transducers	E	3	0	-
SDMB630E	Data Mining in Biological System	E	3	0	-
SMLB730E	Machine Learning for Biological Systems	E	3	0	-
SDRD730E	Drug Delivery	E	3	0	-
SPH0730E	Pharmaceutical Operations	E	3	0	-
SAOR830E	Artificial Organs and Rehabilitative Engineering	E	3	0	-
SCTE830E	Cellular and Tissue Engineering	E	3	0	-
SAOR930E	Artificial Organs and Rehabilitation Engineering - II	E	3	0	-
SMFL930E	Microfluidics: Physics and Applications	E	3	0	-
SBEL930E	Bioelectrics	E	3	0	-

Table 5.2: Curriculum of Int. M.Tech (BME): 2012-17

## 6. Dual Degree M.Tech - PhD Programmes

The following courses are part of Postgraduate programmes offered at IIIT Allahabad.

### 6.1 Dual Degree M.Tech IT (BI) - PhD

The curricula for the Master of Technology in IT with specialization in Bioinformatics and PhD (Dual Degree) is as follows:

#### 6.1.1 M.Tech IT (BI) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (BI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (BI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM440C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
SMLB331E	Machine Learning in Biological Systems	E	3	1	-
SMMD331E	Molecular Medicine	E	3	1	-
SBIP331E	Biological Imaging and Processing	E	3	1	-
SCNS331E	Computational Neurosciences	E	3	1	-
SBAN331E	Big-data Analytics	E	3	1	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.1: Curriculum of M.Tech IT (BI) - PhD: 2016

### 6.1.2 M.Tech IT (BI) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (BI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (BI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
SDMB231E	Data Mining in Biological Systems	E	3	1	-
SBNT231E	Bio-nanotechnology	E	3	1	-
SCAD231E	Computer-Aided Drug Design	E	3	1	-
SMSP231E	Molecular Structure Prediction and Visualization	E	3	1	-
SSYB331E	Systems Biology	E	3	1	-
SCIF331E	Cheminformatics	E	3	1	-
SSYB331E	Systems Biology for Biological Systems	E	3	1	-
SMLB331E	Machine Learning for Biological Systems	E	3	1	-
IPAC331E	Parallel Computing	E	3	1	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.2: Curriculum of M.Tech IT (BI) - PhD: 2015

### 6.1.3 M.Tech IT (BI) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (BI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (BI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-

	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
SMSP231E	Molecular Structure Prediction and Visualisation	E	3	1	-
SCAD231E	Computer Aided Drug Design	E	3	1	-
SDMB231E	Data Mining in Biological Systems	E	3	1	-
SSYB331E	Systems Biology	E	3	1	-
SCIF331E	Cheminformatics	E	3	1	-
SMLB331E	Machine Learning for Biological Systems	E	3	1	-
IPAC331E	Parallel Computing	E	3	1	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.3: Curriculum of M.Tech IT (BI) - PhD: 2014

## 6.2 Dual Degree M.Tech IT (CLIS) - PhD

The curricula for the Master of Technology in IT with specialization in Cyber Law and Information Security and PhD (Dual Degree) is as follows:

### 6.2.1 M.Tech IT (CLIS) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (CLIS) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (CLIS) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IADC240E	Advanced Cryptography	E	4	0	-
IMWS240E	Mobile and Wireless Security	E	4	0	-



ICFN240E	Computer Forensics	E	4	0	-
ISAC240E	Security Architecture	E	4	0	-
ITRA240E	Technical Risk Assessment	E	4	0	-
ISSE240E	Software Security	E	4	0	-
IISA240E	Information Security Audit	E	4	0	-
IIAM240E	Identity and Access Management	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDBS340E	Database Security	E	4	0	-
IOSS340E	Operating System Security	E	4	0	-
IBCP340E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA340E	Security Audit	E	4	0	-
ICVS340E	Cloud and Virtualization Security	E	4	0	-
IISP340E	Information and Information System Privacy	E	4	0	-
<b>SEMESTER - 5</b>					
(Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)					

Table 6.4: Curriculum of M.Tech IT (CLIS) - PhD: 2016

### 6.2.2 M.Tech IT (CLIS) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b>					
(same as M.Tech IT (CLIS) Sem - 1)					
<b>SEMESTER - 2</b>					
(same as M.Tech IT (CLIS) Sem - 2)					
<b>SEMESTER BREAK</b>					
IRES310P	Project	P	10	0	-
<b>SEMESTER - 3</b>					
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 4</b>					
IREM140C	Research Credits	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
ICFN240E	Computer Forensics	E	4	0	-
ISAC240E	Security Architecture	E	4	0	-
ITRA240E	Technical Risk Assessment	E	4	0	-
ISSE240E	Software Security	E	4	0	-
IISA240E	Information Security Audit	E	4	0	-
IIAM240E	Identity and Access Management	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IDBS340E	Database Security	E	4	0	-
IOSS340E	Operating System Security	E	4	0	-
IBCP340E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-

ISCA340E	Security Audit	E	4	0	-
ICVS340E	Cloud and Virtualization Security	E	4	0	-
IISP340E	Information and Information System Privacy	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.5: Curriculum of M.Tech IT (CLIS) - PhD: 2015

### 6.2.3 M.Tech IT (CLIS) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (CLIS) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (CLIS) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IMWS240E	Mobile and Wireless Security	E	4	0	-
ICFN240E	Computer Forensics	E	4	0	-
ISAC240E	Security Architecture	E	4	0	-
ITRA240E	Technical Risk Assessment	E	4	0	-
ISSE240E	Software Security	E	4	0	-
IISA240E	Information Security Audit	E	4	0	-
IIAM240E	Identity and Access Management	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDBS340E	Database Security	E	4	0	-
IOSS340E	Operating System Security	E	4	0	-
IBCP340E	Business Continuity Planning and Disaster Recovery Planning	E	4	0	-
ISCA340E	Security Audit	E	4	0	-
ICVS340E	Cloud and Virtualization Security	E	4	0	-
IISP340E	Information and Information System Privacy	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
MBCP340E	BCP & BRP	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.6: Curriculum of M.Tech IT (CLIS) - PhD: 2014

### 6.3 Dual Degree M.Tech IT (HCI) - PhD

The curricula for the Master of Technology in IT with specialization in Human Computer Interaction and PhD (Dual Degree) is as follows:

#### 6.3.1 M.Tech IT (HCI) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (HCI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (HCI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IADM240E	Advanced Database Management System	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IPID140E	Principles of Interactive Design	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.7: Curriculum of M.Tech IT (HCI) - PhD: 2016

#### 6.3.2 M.Tech IT (HCI) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (HCI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (HCI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-

	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IADM240E	Advanced Database Management System	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
ISDK240E	Software for Data and Knowledge Engineering	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IIRT340E	Information Retrieval	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.8: Curriculum of M.Tech IT (HCI) - PhD: 2015

### 6.3.3 M.Tech IT (HCI) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (HCI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (HCI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IADM240E	Advanced Database Management System	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-

ISC0240E	Soft Computing	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
ISDK240E	Software for Data and Knowledge Engineering	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IIRT340E	Information Retrieval	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)					

Table 6.9: Curriculum of M.Tech IT (HCI) - PhD: 2014

## 6.4 Dual Degree M.Tech IT (IS) - PhD

The curricula for the Master of Technology in IT with specialization in Intelligent Systems and PhD (Dual Degree) is as follows:

### 6.4.1 M.Tech IT (IS) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b> (same as M.Tech IT (IS) Sem - 1)					
<b>SEMESTER - 2</b> (same as M.Tech IT (IS) Sem - 2)					
<b>SEMESTER BREAK</b>					
IRES310P	Project	P	10	0	-
<b>SEMESTER - 3</b>					
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 4</b>					
IREM140C	Research Credits	P	20	0	-
<b>ELECTIVES</b>					
IDS240E	Digital System Design	E	4	0	-
IDM240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
<b>SEMESTER - 5</b>					

(Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				
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Table 6.10: Curriculum of M.Tech IT (IS) - PhD: 2016

### 6.4.2 M.Tech IT (IS) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (IS) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (IS) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IDS240E	Digital System Design	E	4	0	-
IDM240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
IDRT340E	Graph Theory	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.11: Curriculum of M.Tech IT (IS) - PhD: 2015

### 6.4.3 M.Tech IT (IS) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (IS) Sem - 1)				

	<b>SEMESTER - 2</b> (same as M.Tech IT (IS) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IDSD240E	Digital System Design	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
ISDK240E	Software Systems for Data Mining and Knowledge Engineering	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IIRT340E	Information Retrieval	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.12: Curriculum of M.Tech IT (IS) - PhD: 2014

## 6.5 Dual Degree M.Tech IT (RO) - PhD

The curricula for the Master of Technology in IT with specialization in Robotics and PhD (Dual Degree) is as follows:

### 6.5.1 M.Tech IT (RO) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (RO) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (RO) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-

	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IIVP240E	Image and Video Processing	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
INDS340E	Nonlinear Dynamics	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.13: Curriculum of M.Tech IT (RO) - PhD: 2016

### 6.5.2 M.Tech IT (RO) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (RO) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (RO) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IPC0240E	Parallel Computing	E	4	0	-
ISC0240E	Soft Computing	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDC0340E	Data Compression	E	4	0	-



IMOC340E	Mobile Computing	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-
<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)					

Table 6.14: Curriculum of M.Tech IT (RO) - PhD: 2015

### 6.5.3 M.Tech IT (RO) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (RO) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (RO) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IIVP240E	Image and Vision Processing	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
IHUR340E	Humanoid Robotics	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IRMP340E	Robot Motion Planning	E	4	0	-
<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)					

Table 6.15: Curriculum of M.Tech IT (RO) - PhD: 2014

## 6.6 Dual Degree M.Tech IT (SE) - PhD

The curricula for the Master of Technology in IT with specialization in Software Engineering and PhD (Dual Degree) is as follows:

### 6.6.1 M.Tech IT (SE) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (SE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (SE) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IERP240E	Enterprise Resource Planning	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-
I00D340E	Object Oriented Software Engineering and Design Patterns	E	4	0	-
IMSE340E	Mobile Software Engineering	E	4	0	-
IEMS340E	Embedded Systems	E	4	0	-
IABS340E	Agent Based Systems	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.16: Curriculum of M.Tech IT (SE) - PhD: 2016

### 6.6.2 M.Tech IT (SE) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (SE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (SE) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				

IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IERP240E	Enterprise Resource Planning	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
INLP240E	Natural Language Processing	E	4	0	-
IPC0240E	Parallel Computing	E	4	0	-
IGRT240E	Graph Theory	E	4	0	-
IMCL240E	Machine Learning Tools and Techniques	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
ICCS340E	Cognition and Cognitive Process Modeling	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
	<b>SEMESTER - 5</b>				
	(Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.17: Curriculum of M.Tech IT (SE) - PhD: 2015

### 6.6.3 M.Tech IT (SE) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (SE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (SE) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IERP240E	Enterprise Resource Planning	E	4	0	-
IDMW240E	Data Mining and Warehousing	E	4	0	-
IADM240E	Advanced Database Management System	E	4	0	-

IDSS240E	Distributed Systems	E	4	0	-
ISDK240E	Software for Data and knowledge Engineering	E	4	0	-
IIVP240E	Image and Vision Processing	E	4	0	-
IEMB340E	Modelling, Design and Analysis of Embedded Systems	E	4	0	-
IDC0340E	Data Compression	E	4	0	-
IINR340E	Information Retrieval	E	4	0	-
ICCS340E	Cognition and Cognitive Process Modelling	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
IVIR340E	Virtual Reality	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
IESE340E	Embedded Software Engineering	E	4	0	-
<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)					

Table 6.18: Curriculum of M.Tech IT (SE) - PhD: 2014

## 6.7 Dual Degree M.Tech IT (WCE) - PhD

The curricula for the Master of Technology in IT with specialization in Wireless and Communication Engineering and PhD (Dual Degree) is as follows:

### 6.7.1 M.Tech IT (WCE) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b> (same as M.Tech IT (WCE) Sem - 1)					
<b>SEMESTER - 2</b> (same as M.Tech IT (WCE) Sem - 2)					
<b>SEMESTER BREAK</b>					
IRES310P	Project	P	10	0	-
<b>SEMESTER - 3</b>					
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 4</b>					
IREM140C	Research Credits	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-

EDSP240E	Digital Signal Processing	E	4	0	-
IMSE340E	Mobile Software Engineering	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
ECLN340E	Cellular Networks	E	4	0	-
ESAS340E	Smart Antennas	E	4	0	-
<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)					

Table 6.19: Curriculum of M.Tech IT (WCE) - PhD: 2016

### 6.7.2 M.Tech IT (WCE) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
<b>SEMESTER - 1</b> (same as M.Tech IT (WCE) Sem - 1)					
<b>SEMESTER - 2</b> (same as M.Tech IT (WCE) Sem - 2)					
<b>SEMESTER BREAK</b>					
IRES310P	Project	P	10	0	-
<b>SEMESTER - 3</b>					
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
<b>SEMESTER - 4</b>					
IREM140C	Research Credits	P	20	0	-
<b>ELECTIVES</b>					
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
IPCO240E	Parallel Computing	E	4	0	-
EDET240E	Detection and Estimation Theory	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
EDSP240E	Digital Signal Processing	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
EODC340E	Optoelectronic Devices and Circuits	E	4	0	-
ERSE340E	Radar and Satellite Communication	E	4	0	-
EMIM340E	MIMO Communication	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
<b>SEMESTER - 5</b>					

(Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				
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Table 6.20: Curriculum of M.Tech IT (WCE) - PhD: 2015

### 6.7.3 M.Tech IT (WCE) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech IT (WCE) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech IT (WCE) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>ELECTIVES</b>				
IMWS240E	Mobile and Wireless Security	E	4	0	-
EOCN240E	Optical Communication	E	4	0	-
IDSS240E	Distributed Systems	E	4	0	-
EITC240E	Information Theory and Coding	E	4	0	-
ISCO240E	Soft Computing	E	4	0	-
EARD240E	Antenna and RF Design	E	4	0	-
IWSN240E	Wireless Sensor Networks	E	4	0	-
EDSP240E	Digital Signal Processing	E	4	0	-
ISDK240E	Software for Data and Knowledge Engineering	E	4	0	-
IDCO340E	Data Compression	E	4	0	-
IMDM340E	Mobile Data Management	E	4	0	-
ICIS340E	Cryptography and Information Security	E	4	0	-
EODC340E	Optoelectronic Devices and Circuits	E	4	0	-
ERSE340E	Radar and Satellite Communication	E	4	0	-
EMIM340E	MIMO Communication	E	4	0	-
IMOC340E	Mobile Computing	E	4	0	-
EOPN340E	Optical Networks	E	4	0	-
IESE340E	Embedded Software Engineering	E	4	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.21: Curriculum of M.Tech IT (WCE) - PhD: 2014

## 6.8 Dual Degree M.Tech ECE (MI) - PhD

The curricula for the Master of Technology in ECE with specialization in Microelectronics and PhD (Dual Degree) is as follows:

### 6.8.1 M.Tech ECE (MI) - PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	SEMESTER - 1 (same as M.Tech ECE (MI) Sem - 1)				
	SEMESTER - 2 (same as M.Tech ECE (MI) Sem - 2)				
	SEMESTER BREAK				
IRES310P	Project	P	10	0	-
	SEMESTER - 3				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	SEMESTER - 4				
IREM140C	Research Credits	P	20	0	-
	SEMESTER - 5 (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.22: Curriculum of M.Tech ECE (MI) - PhD: 2016

### 6.8.2 M.Tech ECE (MI) - PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	SEMESTER - 1 (same as M.Tech ECE (MI) Sem - 1)				
	SEMESTER - 2 (same as M.Tech ECE (MI) Sem - 2)				
	SEMESTER BREAK				
IRES310P	Project	P	10	0	-
	SEMESTER - 3				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	SEMESTER - 4				

IREM140C	Research Credits	P	20	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.23: Curriculum of M.Tech ECE (MI) - PhD: 2015

### 6.8.3 M.Tech ECE (MI) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	<b>SEMESTER - 1</b> (same as M.Tech ECE (MI) Sem - 1)				
	<b>SEMESTER - 2</b> (same as M.Tech ECE (MI) Sem - 2)				
	<b>SEMESTER BREAK</b>				
IRES310P	Project	P	10	0	-
	<b>SEMESTER - 3</b>				
IREM340C	Research Methodology	C	4	0	-
IINP330C	Independent Study	C	3	0	-
	Elective - 1	E	4	0	-
	Elective - 2	E	4	0	-
	<b>SEMESTER - 4</b>				
IREM140C	Research Credits	P	20	0	-
	<b>SEMESTER - 5</b> (Rules of Ph.D. programme shall apply. Refer PG manual for post Sem-4 details)				

Table 6.24: Curriculum of M.Tech ECE (MI) - PhD: 2014



## 7. Dual Degree MBA - PhD Programmes

The following courses are part of Postgraduate programmes offered at IIIT Allahabad.

### 7.1 Dual Degree MBA - PhD

The curricula for the Masters of Business Administration and PhD (Dual Degree) is as follows:

#### 7.1.1 MBA-PhD: 2016

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	SEMESTER - 1 (same as MBA Sem - 1)				
	SEMESTER - 2 (same as MBA Sem - 2)				
	SEMESTER - 3 (same as MBA Sem - 3)				
	SEMESTER - 4 (same as MBA Sem - 4)				
	(Refer PG manual for post Sem-4 details)				

Table 7.1: Curriculum of MBA - PhD: 2016

#### 7.1.2 MBA-PhD: 2015

Code	Title	Type	Theory cr.	Lab/Paper cr.	Prerequisites
	SEMESTER - 1 (same as MBA Sem - 1)				
	SEMESTER - 2 (same as MBA Sem - 2)				
	SEMESTER - 3 (same as MBA Sem - 3)				
	SEMESTER - 4 (same as MBA Sem - 4)				

	(Refer PG manual for post Sem-4 details)				
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Table 7.2: Curriculum of MBA - PhD: 2015

### 7.1.3 MBA (IT) - PhD: 2014

Code	Title	Type	Theory cr.	Lab/ Paper cr.	Prerequisites
	SEMESTER - 1 (same as MBA Sem - 1)				
	SEMESTER - 2 (same as MBA Sem - 2)				
	SEMESTER - 3 (same as MBA Sem - 3)				
	SEMESTER - 4 (same as MBA Sem - 4)				
	(Refer PG manual for post Sem-4 details)				

Table 7.3: Curriculum of MBA - PhD: 2014