

Indian Institute of Information Technology, Allahabad
Department of Information Technology
B.Tech. IT curriculum
(2022 Batch)

Total Credit : 164

Semester 1 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Physics	PHY	Core	4	2-1-1
2	Linear Algebra	LAL	Core	4	3-1-0
3	Introduction to Programming	ITP	Core	4	2-1-1
4	Fundamentals of Electrical & Electronics Engg.	FEE	Core	4	2-1-1
5	Professional Communication	PFC	Core	2	1-0-1
6	Principles of Management	POM	Core	2	1-1-0
Total					11-10-08
				20	29

Semester 2 Total Credit: 22					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Discrete Mathematical Structures	DMS	Core	4	3-1-0
2	Univariate and Multivariate Calculus	UMC	Core	4	3-1-0
3	Computer Organization and Architecture	COA	Core	4	2-1-1
5	Data Structures	DST	Core	4	2-1-1
6	Principles of Communication Engineering	PCE	Core	4	2-1-1
7	Principle of Economics	POE	Core	2	2-0-0
Total					14-10-06
				22	30

Semester 3 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Probability and Statistics	PAS	Hard	4	3-1-0
2	Theory of Computation	TOC	Hard	4	2-1-1
3	Object Oriented Methodologies	OOM	Hard	4	2-1-1
4	Operating System	OPS	Hard	4	2-1-1
5	Introduction to Finance	IOF	Hard	2	2-0-0
6	Introduction to Marketing	IOM	Hard	2	1-0-1
Total					12-08-08
				20	28

B.Tech. IT 2022 Batch (Proposed Curriculum)

Semester 4 Total Credit: 21					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Design and Analysis of Algorithms	PC-IT-DAA-404	PCC	4	3-0-2-0
2	Principles of Programming Language	PC-IT-PPL-403	PCC	3	3-0-0-0
3	Computer Networks	PC-IT-CNE-404	PCC	4	3-0-2-0
4	Software Engineering	PC-IT-SOE-303	PCC	3	2-0-2-0
5	Database Management System	PC-IT-DBM-404	PCC	4	3-0-2-0
6	Multi-Disciplinary Minor-1		MDM	3	3-0-0-0
Total				21	17-00-08-00
					25

Semester 5 Total Credit: 25					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Cyber Security	PC-IT-CSE301	PCC	4	3-0-2-0
2	Introduction to Machine Learning	PC-IT-IML302	PCC/VSEC	4	3-0-2-0
3	Image and Video Processing	PC-IT-IVP303	PCC/VSEC	4	3-0-2-0
4	Artificial Intelligence	PC-IT-AIN304	PCC	3	2-0-2-0
5	Project-I (Research Methodology)	PC-IT-PRO351	ELC	2	0-0-4-0
6	Computer Graphics and Visualization	PC-IT-CGV208	PCC	3	2-0-2-0
7	Design Thinking and Innovation	HM-MS-DTI306	HSMC	2	1-0-2-0
8	Multi-Disciplinary Minor-2		MDM	3	3-0-0-0
Total				25	17-0-16-0
					33

Semester 6 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Data Analytics	PC-IT-DAN305	PCC	3	2-0-2-0
2	Project-II	PC-IT-PRJ352	ELC	4	0-0-8-0
3	Biology for Engineers	BS-AS-BFE301	BSC	2	2-0-0-0
4	Elective-1	PE-IT-XXX401	PEC	3	3-0-0-0
5	Elective-2	PE-IT-XXX402	PEC	3	3-0-0-0
6	Indian/Foreign language Regional Language, Sanskrit, German, Japanese, French	HM-xx-XXX304	HSMC (AEC)	2	1-0-2-0
7	Multi-Disciplinary Minor-3		MDM	3	3-0-0-0
Total				20	14-0-12-0
					26

Exit: After successful completion of 6 semesters, a student any get an exit option as per ordinance after completion of the summer semester internship (3 credits) and additional 3 credit courses in summer.

Summer Semester Total Credit: 3					
Sl. No.	Course Name	Code	Type	Credit	
1	Internship	PC-IT-ITP353	ELC	3	Credit will be added in VII Sem.

Note: Internship will be evaluated in the beginning of seventh semester. Its credit and grades will be reflected in the 7th Semester Grade Sheet.

Semester 7 Total Credit: 21					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Minor Project	PC-IT-PRJ451	ELC	4	0-0-8-0
2	Elective-3	PE-IT-XXX403	PEC	3	3-0-0-0
3	Elective-4	PE-IT-XXX404	PEC	3	3-0-0-0
4	Open Elective-1	OE-ZZ-XXX4SS	OEC	3	3-0-0-0
5	History of Indian Civilizations / Kautilya's Arthashastra / Vedic Mathematics / Vedic Corpus/Wisdom from the Ages/Panini's Grammar	HM-MS-XXX408	HSMC (IKS)	2	2-0-0-0
6	Internship (Summer Semester)	PC-IT-TO353	ELC	3	0-0-0-6
7	Multi-Disciplinary Minor-4		MDM	3	3-0-0-0
Total				21	14-0-8-6
					28

Semester 8 Total Credit: 15					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Major Project	PC-IT-PRJ452	ELC	6	0-0-12-0 0-0-0-6
2	Elective-5	PE-IT-XXX402	PEC	3	3-0-0-0 0-0-0-3*
3	Open Elective-2	OE-ZZ-XXX4SS	OEC	3	3-0-0-0 0-0-0-3*
4	Multi-Disciplinary Minor-5		MDM	3	3-0-0-0
Total				15	9-0-12-0
					21

*8th Semester courses may be allowed to join via MOOC/NPTEL etc.

MMDM Baskets (for students admitted in July 2022):

Minor-I: Entrepreneurship & Innovation [1-Fundamentals of Entrepreneurship, 2-Social Entrepreneurship, 3-Entrepreneurial Finance, 4-Innovation Management, 5-Managing Corporate Entrepreneurship]

Minor-II: Economics & Finance for Engineers [1-Indian Economics, 2-Money and Banking, 3-Economics of Business Environment, 4-Start-up Economics, 5-Digital Economics]

Minor-III: Science of Happiness [1-Introduction to Science of Happiness, 2-Understanding Domains of Happiness, 3-Happiness Indices, 4-Assessment of happiness, 5-Independent Study of Science of Happiness]

Indian Institute of Information Technology, Allahabad
Department of Information Technology
B.Tech. ECE curriculum
(2022 Batch)

Total Credit : 161

Semester 1 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Physics	PHY	Core	4	2-1-1
2	Linear Algebra	LAL	Core	4	3-1-0
3	Introduction to Programming	ITP	Core	4	2-1-1
4	Fundamentals of Electrical & Electronics Engg.	FEE	Core	4	2-1-1
5	Professional Communication	PFC	Core	2	1-0-1
6	Principles of Management	POM	Core	2	1-1-0
					11-10-08
Total				20	29

Semester 2 Total Credit: 22					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Univariate and Multivariate Calculus	UMC	Core	4	3-1-0
2	Digital System Design	DSD	Core	4	3-1-0
3	Data Structures	DST	Core	4	2-1-1
5	Electronic Devices and Circuits	EDC	Core	4	2-1-1
6	Electromagnetic Field and Waves	EFW	Core	4	2-1-1
7	Electronic Workshop	EWS	Core	2	2-0-0
					14-10-06
Total				22	30

Semester 3 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Analog Communication	ANC	Hard	4	2-1-1
2	Analog Electronics	ANE	Hard	4	2-1-1
3	Electrical Engineering	ELE	Hard	4	3-0-1
4	Electronics Measurement and Instrumentation	EMI	Hard	3	2-0-1
5	Micro Processor Interface and Programming	MIP	Hard	4	2-1-1
6	Probability and Statistics	PAS	Hard	4	3-1-0
					13-08-10
Total				22	31

B.Tech. ECE 2022 Batch (Proposed Curriculum)

Semester 4 Total Credit: 21					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Discrete Time Signals and Systems	PC-EC-DTS-403	PCC	3	3-0-0-0
2	Control Systems	PC-EC-COS-404	PCC	4	3-0-2-0
3	Digital IC Design	PC-EC-DID-404	PCC	4	3-0-2-0
4	Integrated Circuit Technology	PC-EC-ICT-503	PCC	3	3-0-0-0
5	Antenna and Wave Propagation	PC-EC-AWP-404	PCC	4	3-0-2-0
6	Multi-Disciplinary Minor-1		MDM	3	3-0-0-0
Total				21	18-0-06-0
					24

Exit: After successful completion of 4 semesters, a student may get an exit option as per ordinance. They need to do *two courses* before exit.

Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Embedded System Design	PC-EC-ESD317	PCC	3	2-0-2-0
2	Mobile and Wireless Communication	PC-EC-MWC318	PCC	3	2-0-2-0

Semester 5 Total Credit: 21					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Embedded System Design	PC-EC-ESD317	PCC	3	2-0-2-0
2	Optical Communication	PC-EC-OPC319	PCC	3	2-0-2-0
3	Microwave Engineering	PC-EC-MWE315	PCC	3	2-0-2-0
4	Digital Communication	PC-EC-DCO316	PCC	3	3-0-0-0
5	Computer Networks		PCC	3	2-0-2-0
6	Multi-Disciplinary Minor-2	MD-xx-XXX303	MDM	3	3-0-0-0
7	Design Thinking and Innovation	HM-MS-DTI306	HSMC (AEC)	2	1-0-2-0
	SMT Workshop		VSEC	1	0-0-2-0
Total				21	17-0-12-0
					29

Semester 6 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Digital Signal Processing	PC-EC-DSP313	PCC	4	3-0-2-0
2	Mobile and Wireless Communication	PC-EC-MWC318	PCC	4	3-0-2-0
3	Program Elective-I	PE-EC-xxx301	PEC	3	2-0-2-0
4	Project	PP-EC-PRJ301	VSEC	4	0-0-8-0
5	Multi-Disciplinary Minor-3	MD-xx-XXX304	MDM	3	3-0-0-0
6	Indian/Foreign Language Regional Language, Sanskrit, German, Japanese, French	HM-xx-XXX304	HSMC (AEC)	2	1-0-2-0
Total				20	12-0-16-0
					28

Exit: After successful completion of 6 semesters, a student any get an exit option as per ordinance. They need to do two courses before exit.

Sl. No.	Course Name	Code	Type	Credit	L-T-P-S
1	Skill based Elective – I		PCC	3	2-0-2-0
2	Skill based Elective - II		PCC	3	2-0-2-0

Summer Semester Total Credit: 3					
Sl. No.	Course Name	Code	Type	Credit	
1	Internship	PC-EC-ITP353	ELC	3	Credit will be added in VII Sem.

Note: Internship will be evaluated in the beginning of seventh semester. Its credit and grades will be reflected in the 7th Semester Grade Sheet.

Semester 7 Total Credit: 21					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Program Elective-II	PE-EC-xxx403	PEC	3	3-0-0-0
2	Program Elective-III	PE-EC-xxx404	PEC	3	3-0-0-0
3	Open Elective-I	OE-xx-xxx4xx	OEC	3	3-0-0-0
4	Multi-Disciplinary Minor-4	MD-xx-XXX405	MDM	3	3-0-0-0
5	a) History of Indian Civilizations, b) Kautilya's Arthashastra, c) Vedic Mathematics, d) Vedic Corpus, e) Wisdom from the Ages, f) Panini's Grammar	HM-MS-XXX08	HSMC (IKS)	2	2-0-0-0
6	Internship (Summer Semester)	PC-EC-ITP353	ELC	3	0-0-0-6
7	Mini Project		PEC	4	0-0-8-0
Total				21	14-0-8-6
					22+6

Semester 8 Total Credit: 14					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Major Project	PP-EC-PRJ403	ELC	8	0-0-16-0
2	*Program Elective-IV	PE-EC-xxx405	PEC	3	0-0-0-3
3	*Multi-Disciplinary Minor-5	MD-xx-XXX405	MDM	3	3-0-0-0
Total				14	3-0-16-6
					25

*8th Semester courses may be allowed to join via MOOC/NPTEL etc.

Honors:

- “Honors” is an additional credential, a student will earn if he/she opts for the extra 15 credits needed for this in his/her own discipline. The concerned department specifies the course requirements for earning the Honors.
- B.Tech.-ECE-Honor Course: Minimum 8 CGPI and No backlog.
- After 3rd Semester, students may choose extra credits for Honors.
- The 8th Semester project must be an academic project. At least one research publication in Tier I/II conferences or in SCI Journals communicated or one patent filed.

MMDM Baskets (for students admitted in July 2022):

Minor-I: Entrepreneurship & Innovation [1-Fundamentals of Entrepreneurship, 2-Social Entrepreneurship, 3-Entrepreneurial Finance, 4-Innovation Management, 5-Managing Corporate Entrepreneurship]

Minor-II: Economics & Finance for Engineers [1-Indian Economics, 2-Money and Banking, 3-Economics of Business Environment, 4-Start-up Economics, 5-Digital Economics]

Minor-III: Science of Happiness [1-Introduction to Science of Happiness, 2-Understanding Domains of Happiness, 3-Happiness Indices, 4-Assessment of happiness, 5-Independent Study of Science of Happiness]

Indian Institute of Information Technology, Allahabad
Department of Information Technology
B.Tech. IT-BIN curriculum
(2022 Batch)

Total Credit : 164

Semester 1 Total Credit: 20					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Physics	PHY	Core	4	2-1-1
2	Linear Algebra	LAL	Core	4	3-1-0
3	Introduction to Programming	ITP	Core	4	2-1-1
4	Fundamentals of Electrical & Electronics Engg.	FEE	Core	4	2-1-1
5	Professional Communication	PFC	Core	2	1-0-1
6	Principles of Management	POM	Core	2	1-1-0
					11-10-08
Total				20	29

Semester 2 Total Credit: 24					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Discrete Mathematical Structures	DMS	Core	4	3-1-0
2	Univariate and Multivariate Calculus	UMC	Core	4	3-1-0
3	Computer Organization and Architecture	COA	Core	4	2-1-1
4	Business Process Modeling	BPM		2	1-1-0
5	Data Structures	DST	Core	4	2-1-1
6	Principles of Communication Engineering	PCE	Core	4	2-1-1
7	Principle of Economics	POE	Core	2	2-0-0
					15-11-06
Total				24	32

Semester 3 Total Credit: 22					
Sl. No.	Course Name	Code	Type	Credit	L-T-P
1	Probability and Statistics	PAS	Hard	4	3-1-0
2	Theory of Computation	TOC	Hard	4	2-1-1
3	Object Oriented Methodologies	OOM	Hard	4	2-1-1
4	Operating System	OPS	Hard	4	2-1-1
5	Introduction to Finance	IOF	Hard	2	2-0-0
6	Introduction to Marketing	IOM	Hard	2	1-0-1
7	Foreign Language & Intercultural Studies*	FLIS		2	1-1-0
*can be floated in Semester 4 as will depending upon students enrolments					13-10-08
Total				22	31

B.Tech. IT-Bin 2022 Batch (Proposed Curriculum)

Semester 4 Total Credit: 23					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Design and Analysis of Algorithms		PCC	4	3-0-2-0
2	Principles of Programming Language		PCC	3	3-0-0-0
3	Computer Networks		PCC	4	3-0-2-0
4	Software Engineering		PCC	3	2-0-2-0
5	Database Management System		PCC	4	3-0-2-0
6	Foundations of FinTech		PCC	2	1-1-0-0
7	Multi-Disciplinary Minor-1		MDM	3	3-0-0-0
Total Credit				23	18-1-8-0
					27

Semester 5 Total Credit: 21					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Cyber Security	PC-IT-CSE301	PCC	4	3-0-2-0
2	Introduction to Machine Learning	PC-IT-IML302	PCC	4	3-0-2-0
3	Digital Marketing	PC-BI-DMK202	PCC	3	2-1-0-0
4	Artificial Intelligence	PC-IT-AIN304	PCC	3	3-0-0-0
5	Project – I (Research Methodology)	PC-IT-PRO351	PCC	2	0-0-4-0
6	Multi-Disciplinary Minor-2	MD-xx-XXX203	MDM	3	3-0-0-0
7	Design Thinking and innovation	HM-MS-DT306	HSMC (AEC)	2	1-0-2-0
					15-1-10-0
Total				21	26

Semester 6 TotalCredit:18					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Data Analytics	PC-IT-IML302	PCC	3	2-0-2-0
2	Project – II	PC-IT-PRJ352	PCC	4	0-0-8-0
3	Biology for Engineers	BS-AS-BFE301	BSC	2	2-0-0-0
4	Process Mining & Analytics	PC-BI-PM303	PCC	3	2-0-1-0
5	BI-Elective-1	PE-BI-XXX301	PEC	3	3-0-0-0
	BI-Elective-Basket: • Details appended				
6	Multi-Disciplinary Minor-3	MD-xx-XXX204	MDM	3	3-0-0-0
					12-0-11-0
Total				18	23

Exit: After successful completion of 6 semesters, a student may get an exit option as per ordinance after completion of the summer semester internship (3 credits) and additional 3 credit courses in summer.

Summer Semester TotalCredit:3					
Sl. No.	Course Name	Code	Type	Credit	
1	Internship	PC-IT-ITP353	ELC	3	Credit will be added in VII Sem.

Note: Internship will be evaluated in the beginning of seventh semester. Its credit and grades will be reflected in 7th semester Grade sheet.

Semester 7 Total Credit:24					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Minor Project	PCITPRJ4 51	PCC	4	0-0-8-0
2	Big Data Analytics	PEBIXX X403	PCC	3	2-0-2-0
3	Elective-3 BI-Elective II: IT Project Management + IT Electives	PEITXXX 404	PCC	3	3-0-0-0
4	Open Elective-1	OEZZXX X4SS	OEC	3	3-0-0-0
5	a) History of Indian Civilizations, b) Kautiliya's Arthashastra, c) Vedic Mathematics, d) Vedic Corpus, e) Wisdom from the Ages, f) Panini's Grammar	HM-MS- XXX408	HSMC (IKS)	2	2-0-0-0
6	Internship (Summer Semester)	PC-IT- TO353	ELEC	3	0-0-0-6-0
7	Multi-Disciplinary Minor-4	MD-xx- XXX204	MDM	3	3-0-0-0
					13-0-10-06
Total				21	29

Semester 8 Total Credit:15					
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Major Project	PC-IT- PRJ452	ELC	6	0-0-12-0
2	*Elective-4	PE-IT- XXX402	PEC	3	3-0-0-0
3	*Open Elective-2	OE-ZZ- XXX4SS	OEC	3	3-0-0-0
4	*Multi-Disciplinary Minor-5	MD-xx- XXX204	MDM	3	3-0-0-0
					9-0-12-0
Total				15	21

8th Semester courses may be allowed to join via MOOC/ NPTEL.

MMDM Baskets (for students admitted in July 2022):

Minor-I: Entrepreneurship & Innovation [1-Fundamentals of Entrepreneurship, 2-Social Entrepreneurship, 3-Entrepreneurial Finance, 4-Innovation Management, 5-Managing Corporate Entrepreneurship]

Minor-II: Economics & Finance for Engineers [1-Indian Economics, 2-Money and Banking, 3-Economics of Business Environment, 4-Start-up Economics, 5-Digital Economics]

Minor-III: Science of Happiness [1-Introduction to Science of Happiness, 2-Understanding Domains of Happiness, 3-Happiness Indices, 4-Assessment of happiness, 5-Independent Study of Science of Happiness]

Annexure-B: Identified MMDMs

	MMDM-I	MMDM-II	MMDM-III	MMDM-IV	MMDM-V
Title	Entrepreneurship & Innovation	Economics & Finance for Engineers	Science of Happiness	Biological Data Analytics	Medical Diagnostics and Therapeutic Technology
Courses	Fundamentals of Entrepreneurship	Indian Economics	Introduction to Science of Happiness	Proteomics and Genomics	Basics of Human Anatomy & Physiology
	Social Entrepreneurship	Money and Banking	Understanding Domains of Happiness	Next Generation Sequencing	Biomedical Instrumentation
	Entrepreneurial Finance	Economics of Business Environment	Happiness Indices	Cheminformatics for Engineers	Bio-MEMs and Nanotechnology
	Innovation Management	Start-up Economics	Assessment of happiness	Systems Biology and Modeling	Medical Imaging
	Managing Corporate Entrepreneurship	Digital Economics	Independent Study of Science of Happiness	Molecular Structure Prediction	Tissue engineering and Gene therapy