

भारतीय प्रौद्योगिकी संस्थान मुंबई **AN INSTITUTE OF TECHNOLOGY BOMB** पवई / Powai, मुंबई / Mumbai 400 076



Name of the Student:

H 105 Organic & Inorganic Chemistry H 107 Physical Chemistry S 101 Computer Programming and Utilization E 111 Introduction to Electrical Systems A 105 Calculus I=9.10/10 Academic B 101 Biology H 117 Chemistry Lab E 112 Introduction to Electronics A 106 Linear Algebra I=9.65/10 Academic S 228 Logic for Computer Science E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms	4.0 4.0 6.0 6.0 8.0 c Year 6.0 4.0 c Year 6.0 6.0 6.0	MAMAMAMAMAMAMAMAMAMAMAMAMAMAMAMAMAMAMA	. AA . BB . AA . BB	ME 113 NOCS01 PH 107 PH 117 CPI= 9.1 019, Term: MA 108 ME 119 NOCS02 PH 108 CPI= 9.3 020, Term: EE 236 HS 101 MA 205	Differential Equations Engineering Graphics & Drawing NCC/NSS/NSO Basics of Electricity & Magnetism 5/10 Semester Autumn Electronic Devices Lab Economics Complex Analysis Differential Equations II	4.0 0.0 6.0 3.0 4.0 5.0 0.0 6.0 3.0 6.0 4.0	MA MA MA MA MA MA MA	AA AB PP AA AA AB BB AB
H 107 Physical Chemistry S 101 Computer Programming and Utilization E 111 Introduction to Electrical Systems A 105 Calculus I=9.10/10 Academic B 101 Biology H 117 Chemistry Lab E 112 Introduction to Electronics A 106 Linear Algebra I=9.65/10 Academic S 228 Logic for Computer Science E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	4.0 6.0 6.0 8.0 C Year 6.0 6.0 6.0 6.0 6.0	МА М	. AA . BB . AA . AB . AA . AB . AB . AB	NOCS01 PH 107 PH 117 CPI= 9.1 019, Term: MA 108 ME 119 NOCS02 PH 108 CPI= 9.3 020, Term: EE 236 HS 101 MA 205 MA 207	NCC/NSS/NSO Quantum Physics and Application Physics Lab 0/10 Semester Spring Differential Equations Engineering Graphics & Drawing NCC/NSS/NSO Basics of Electricity & Magnetism 5/10 Semester Autumn Electronic Devices Lab Economics Complex Analysis Differential Equations II	4.0 5.0 0.0 6.0 4.0 4.0	MA MA MA MA MA MA MA	PP AB AB AB AA AA AB PP AA AA AB BB
S 101 Computer Programming and Utilization E 111 Introduction to Electrical Systems A 105 Calculus I=9.10/10 Academic B 101 Biology H 117 Chemistry Lab E 112 Introduction to Electronics A 106 Linear Algebra I=9.65/10 Academic S 228 Logic for Computer Science E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0 6.0 8.0 c Year 6.0 6.0 6.0 6.0 6.0	MAMA MAA MAA MAA MAA MAA MAA MAA MAA MA	. BB . AA . BB . AA . AB . AB . AB . BB . BB . AB	PH 107 PH 117 CPI= 9.1 019, Term: MA 108 ME 119 NOCS02 PH 108 CPI= 9.3 020, Term: EE 236 HS 101 MA 205 MA 207	Quantum Physics and Application Physics Lab 0/10 Semester Spring Differential Equations Engineering Graphics & Drawing NCC/NSS/NSO Basics of Electricity & Magnetism 5/10 Semester Autumn Electronic Devices Lab Economics Complex Analysis Differential Equations II	4.0 3.0 4.0 5.0 0.0 6.0 4.0	MA MA MA MA MA MA	AB AB AB AA AA AA AB BB
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H 117 Chemistry Lab E 112 Introduction to Electronics A 106 Linear Algebra I=9.65/10 Academic S 228 Logic for Computer Science E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	3.0 6.0 4.0 c Year 6.0 6.0 6.0	MA MA MA :: 200 MI MA MA	AB AA AB AB AB AB AB AB AB AB	ME 119 NOCS02 PH 108 CPI= 9.3 020, Term: EE 236 HS 101 MA 205 MA 207	Engineering Graphics & Drawing NCC/NSS/NSO Basics of Electricity & Magnetism 5/10 Semester Autumn Electronic Devices Lab Economics Complex Analysis Differential Equations II	5.0 0.0 6.0 3.0 6.0 4.0	MA MA MA MA MA	AB PP AA AA AA BB
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Academic S 228 Logic for Computer Science E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0 6.0 6.0 6.0	MI MA MA	BB BB AB	020, Term: EE 236 HS 101 MA 205 MA 207	Semester Autumn Electronic Devices Lab Economics Complex Analysis Differential Equations II	6.0 4.0	MA MA	AA BB
S 228 Logic for Computer Science E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0 6.0 6.0 6.0	MI MA MA	BB BB AB	EE 236 HS 101 MA 205 MA 207	Electronic Devices Lab Economics Complex Analysis Differential Equations II	6.0 4.0	MA MA	AA BB
E 207 Electronic Devices & Circuits E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0 6.0 6.0	MA MA	BB AB	HS 101 MA 205 MA 207	Economics Complex Analysis Differential Equations II	6.0 4.0	MA MA	AA BB
E 223 Data Analysis and Interpretation E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0 6.0 c Year	MA MA	AB	MA 205 MA 207	Complex Analysis Differential Equations II	4.0	MA	ВВ
E 225 Network Theory I=9.14/10 Academic S 213 Data Structures and Algorithms E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0 c Year	MA		MA 207	Differential Equations II			
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E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab	6.0	: 26	19 - 2	020, Term:	Semester Spring	FTECHNO	LOGY	BO
E 204 Analog Circuits E 210 Signals and Systems E 214 Digital Circuits Lab		MI	BB	EE 224	Digital Systems	6.0	MA	AA
E 214 Digital Circuits Lab	6.0		AA		Analog Lab	3.0		PP
	6.0	MA	PP	EE 234	Machines Lab	4.0	MA	AA
E 222 Electrical Machines and Power Electronics	3.0	MA	PP	EE 692	R & D Project	6.0	MA	AB
	6.0	MA	. AA					
I=9.79/10				CPI= 9.3	8/10 NOTE O			
Academic	c Year	: 20	20 - 2	021, Term:	Semester Autumn	FTECHNO FTECHNO	LOGY	BOI
S 224 Computer Networks	6.0	MI	CC	EE 309	Microprocessors	6.0	MA	
	6.0		AB		Probability and Random Processes	6.0		AB
E 301 Electromagnetic Waves	6.0		AA		Digital Signal Processing	6.0		AA
E 308 Communication Systems	6.0	MA	AA	HS 301	Philosophy	6.0	MA	AB
I=9.67/10				CPI= 9.4	4/10	FIECHNO		
Academic Academic	c Year	: 20	20 - 2	021, Term:	Semester Spring	FIECHNO	LOGY	BO
S 419 Introducing to Machine Learning	6.0		AB	Water Personal Printers	Power Systems	6.0	MA	BB
S 754 Advanced Image Processing	6.0		AB		Microprocessors Laboratory	3.0		AA
E 302 Control Systems	6.0		BB		Communications Lab	3.0		AA
E 324 Control Systems Lab	3.0		AB		Electronic Design Lab	6.0		AB
F 328 Digital_Communications	6.0		AA		Wavelets	FTEC 6.0		AB
Signature valid				CPI= 9.3	7/10 THE O			
Digitally signed by Umesh Ramchand a	NOLO	GY	BOME	AY SIRABI	प्रधानका संस्थान मुंबई INDIAN INSTITUTE O	ETECHNO	LOCCO	NTIN

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भारतीय प्रौद्योगिकी संस्थान मुंबई

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

पवई / Powai, मुंबई / Mumbai 400 076



Name of the Student: Mantri Krishna Sri Ipsit	ECHNOLO	GY BOI	WBAY HISTORY	ROBBIOLOGICA CONTRACTOR OF THE ROBBIOLOGICAL ROBBIOLOGICA ROBBIOLOGI	oll Number	: 180070032		
Code Name (1997) The INDIAN INSTITUTE OF T	Credits Ta	ag Grad Mark		Name A dear year INDIAN INSTITUTE OF	Credits	Tag Grade/ Marks		
भारतीय प्रारोपिको संस्थान चुंबई INDIAN INSTITUTE O Aca	ademic Year	2021 -	2022, Term	: Semester Autumn				
CS 747 Foundations of Intelligent and Learnin Agents	ng 6.0	MI BC	ES 200	Environmental Studies: Science and Engineering	3.0	MA BC		
DS 203 Programming for Data Science	6.0	MI AA	GNR638	Machine Learning for Remote Sensing	- II 6.0	MA AB		
EE 491 BTP I	6.0	MA AA	HS 200	Environmental Studies	3.0	MA BC		
EE 740 Advanced Data Network	6.0	MA BB						
SPI=8.50/10	ECHNOLO	GY BOI	CPI= 9.2	28/10 NDIANINSTITUTE OF	TECHNO	LOGY BOMBA		
Aca	demic Year:	. 2021 -	2022, Term	: Semester Spring				
CS 347 Operating Systems	6.0	MI AB	EE 492	BTP II	12.0	MA AA		
CS 726 Advanced Machine Learning	6.0	MA AA	EE 613	Nonlinear Dynamical Systems	6.0	MA AA		
CS 769 Optimization in Machine Learning	6.0	MA AA	GC 101	Gender in the workplace	0.0	MA PP		
SPI=10.00/10			CPI= 9.3	36/10 CF				
Mandatory Course Credits (MA)	EGRIN, J. 189	261.0	Overall	CPI OF TRUE HER INDIAN INSTITUTE OF	= 9.36/10			

Final Result

The student has completed the academic requirements of the programme in the month of May 2022 for the award of
Bachelor of Technology in Electrical Engineering and Minor in (1) Computer Science and Engineering (2) Artificial Intelligence and Data
Science

Signature & Seal of Transcript Issuing Authority:

Overall Credits Completed

Overall Grade Points

Joint/Assistant Registrar (Academic), IIT Bombay

Date: 13-August-2022

CONTINUED



भारतीय प्रौद्योगिकी संस्थान मुंबई

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

पवई / Powai, मुंबई / Mumbai 400 076



Name of the Student: Mantri Krishna Sri Ipsit Roll Number: 180070032

General Information

The medium of instruction at the Institute is English.

Course credits and grade: Each course is associated with credits which are an indicator of its relative weight in calculating the academic performance. A two-letter grade is awarded to students on the basis of their performance in examinations and assignments of a specific course. The letter grades have numerical equivalents on a 0-10 scale as given below.

Letter Grade	AP	AA	AB	ВВ	ВС	CC	CD	DD	FFAN	FR	W	DX	PP	NP GY	AU
Numerical Equivalent	10	10	90GY	8	7.Y MIR	6	5	4	0	0.51	HUTE	OFTE	SHNC	LOGY	BOM

FF: Fail, FR: Fail and repeat, W: Withdrawn, DX: Insufficient attendance, AU: Satisfactory performance in an audit course, PP: Pass, NP: Not Pass. The minimum passing grade in a course is DD. The grade AP is awarded to students with exceptional performance in core courses of a programme. Numerical equivalents of letter grades are referred to as grade points.

The numerical grade points are not convertible into marks or percentages.

Performance Indicators: The performance of a student in a semester is given by a number called the Semester Performance Index (SPI), which is the weighted average of the earned grade points in the courses during the semester.

If a student has courses with credits C₁, C₂,..., C_n, with grade points of G₁, G₂,..., G_n respectively, then

Semester Credits = $C_1 + C_2 + ... + C_n$ Semester Grade Points = $C_1G_1 + C_2G_2 + ... + C_nG_n$ SPI = Semester Grade Points ÷ Semester Credits

Cumulative Performance Index (CPI) is the weighted average of the grade points in the courses in all semesters. The indices SPI and CPI are calculated upto two decimal places.

Courses are tagged as MA: Mandatory (Core/Elective), MI: Minor, HO: Honours, AL: Additional Learning, AU: Audit

- Each degree programme has mandatory credits consisting of core courses, elective courses, and non credit courses. These courses are tagged as MA
- For calculation of SPI and CPI, grades obtained only in mandatory courses (MA) are considered.
- Students can supplement the learning experience by crediting additional courses. Credits earned in these courses, when appropriate, can earn additional credentials either in the form of "Honours" (HO) in the chosen discipline or "Minor" (MI) in another discipline or both.
- "Honours" is not indicative of proficiency, and can be earned by completing the additional prescribed set of advanced core and elective courses in the chosen discipline. "Minor" can be earned by completing the prescribed set of courses in a discipline other than the chosen discipline. Additional courses that are not used for earning "Honours" or "Minor" are tagged as "Additional Learning" (AL).
- The AU is awarded based on satisfactory attendance and fulfilling the minimum requirements as set by the course instructor. It carries no grade points and does
 not figure in SPI or CPI calculations.
- PP or NP is awarded in some credit courses that are not earmarked with a letter grade. Correspondingly, PP/NP does not carry a grade point.
- O-IITB is/are the Course(s) completed by a student outside IIT Bombay (NPTEL/ Swayam/ Semester Exchange). These course(s) contribute towards the completion
 of credits for a degree requirement. However, grades/marks earned for such course(s) is/are not considered for SPI / CPI calculation.

The Institute does not award any class or division. Notionally, the CPI may be multiplied by a factor of 10 to obtain a numerical percentage.

The veracity of this document can be ascertained by using the verification ticket number in the URL given at the bottom of this page.

END OF TRANSCRIPT Roll Number: 180070032

Online Verification URL: https://portal.iitb.ac.in/verify

ge: 3/3

Verification Ticket Number: 24 4630 1727 8320 3099

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भारतीय प्रौद्योगिकी राख्यान शुंबई INDIAN INSTITUTE OF TECHNOLOGY BOMBAY भारतीय प्रौद्योगिकी संस्थान गुंबई INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
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