

भारतीय प्रौद्योगिकी संस्थान मुंबई

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

पवई / Powai, मुंबई / Mumbai 400 076



Name of the Student: IND)/VARSHITH SREERAMDASS.CHNOLOGY BOMBAJoining Month & Year: IND July 2015 TUTE OF TECHNOLOGY BOMBAY

Programme: Bachelor of Technology (B.Tech.) BOMBAY was a supplying the programme and the supplying t

Academic Unit:

Computer Science and Engineering

Code Name AND AN INSTITUTE OF TEC	Credit	s Tag	Grad	de	Code Name Have the INDIAN INSTITUTE OF TE	Credit	s Tag	Grade
भागतिय क्षेत्राविकारी साक्षांत्र हुन्हें IND AN INSTITUTE OF Acad	emic Y	ear: 2	015 -	201	16, Term: Semester Autumn IAN INSTITUTE OF TE	CHNO	OGY	BOMB
CH 105 Organic & Inorganic Chemistry TEOFIEC	4.0	OCMA	BB		MA 105 Calculus THE INDIAN INSTITUTE OF TE	8.0	MA	BABMB
CH 107 Physical Chemistry NINSTITUTE OF TEC		OCMA	BAA		ME 119 Engineering Graphics & Drawing CFTE	5.0	OMA	PAPMB
CH 117 Chemistry Lab INDIAN INSTITUTE OF TEO	3.0		AA					(PP)MB
CS 101 Computer Programming and Utilization	6.0		AB					ABMB
SPI=9.22/10 SPI=9.					CPI=9.22/10 HOURS HAS INDIAN INSTITUTE OF TE			ВОМВ
goving delification attempt real IND ANTINESTITUTE OF Acad	emic Ye	ear: 2	015 -	201	16, Term: Semester Spring NAN INSTITUTE OF TE	CHNO	_OGY	BOMB
BB 101 Biology - BREIND AN INSTITUTE OF TEC	6.0	OCMA	BB		ME 113 Workshop Practice AN INSTITUTE OF TE	14.0	O (MA	EAA MB
CS 152 Abstractions and Paradigms for Programmi			BB		NOCS02 NCC/NSS/NSO MAIDIAN INSTITUTE OF TE	0.0	O MA	PPMB
CS 154 Programming Paradigms Laboratory	3.0		BB		PH 108 Basics of Electricity & Magnetism	6.0		BB
MA 106 Linear Algebra	4.0		AB		PH 117 Physics Lab	3.0	-041	AA
MA 108 Differential Equations	4.0		AB		The parties of the Indian Institute of Tec			
grand defined a corregae INDIAN INSTITUTE OF MEC					/ अपनीय प्रोधानिक स्वयं प्रस्ति IM DIAN INSTITUTE OF TE	CHNO		BOMB
SPI=8.61/10 The	HNOL	QC:	BOM	BAY	CPI=8.92/10	CHNOL	OGY	BOMB
बरवीय शासनात प्रकान कुट IND AN INC ITUIE OF Acad	emic Ye	ear: 2	016 -	201	17, Term: Semester Autumn			BOMB
CS 207 Discrete Structures	6.0	MA	ВВ		CS 293 Data Structures and Alogrithms Lab	3.0	MA	BB
CS 213 Data Structures and Algorithms	6.0	MA	BB		EE 101 Introduction to Electrical and Electronia	cs 8.0	MA	BC
CS 215 Data Analysis and Interpretation	6.0	MA	AB		Circuits and gas IN AN INSTRUTE OF TE			
CS 251 Software Systems Lab	8.0	JAN 18	AB		MA 419 Basic Algebra IND AN MISTINUTE OF TE	8.0	OAL	EWOMB
SPI=8.16/10	HIJOL	O'S A	ROM ROM		CPI=8.66/10			BOMB
per an analysis storm got ING AN INSTITUTE OF Acade	emic Ye	ear: 20	ð16 -	201	At 1 () 201 (m) (m)			BOMB
CS 218 Design and Analysis of Algorithms	6.0	O MA	ВС	E	CS 252 Computer Networks Lab	CH3.0	OMA	FARMB
CS 224 Computer Networks	6.0		AB		El .	CH3.0	OMA	BBMB
CS 226 Digital Logic Design	6.0		BC	BAN	CS 403 Foundations of Machine Learning F OF TEC	6.0	O (MA	AB)MB
CS 228 Logic for Computer Science	6.0		AB		HS 101 Économics			
SPI=8.29/10				BAY				BOMB
Brown State of the Control of TEC	HNO.	on. 20	217	201	S Town Sewater Autum	CHNO	OGY	BOMB
				201				BOMB
CS 305 Computer Architecture	6.0	O MA	BC			H6.0	O MA	BBMB
CS 317 Database and Information Systems	6.0	OCMA	BB		PROPERTY OF THE PARTY OF THE PROPERTY OF THE PARTY OF THE	0H3.01	OMA	BOMB
CS 333 Operating Systems Lab	4.0	MA	AA		CS 475 Computer Graphics	0H6.01	OGY	BOMB
CS 341 Computer Architecture Lab	3.0	MA	AB		HS 309 Introduction to the Study of Language	6.0	MA	BOMB
SPI=8.73/10 avent the IND AN INSTITUTE C. TEC					CPI=8.59/10 AND INSTITUTE OF TEC			
Acade	emic Ye	ar: 20	017 -	201	8, Term: Semester Spring	CHNOL	OCY	BOMB
CS 302 Implementation of Programming Languages	8.0	MA	BB		CS 386 Artificial Intelligence Lab	3.0		BOMB
CS 310 Automata Theory	6.0	MA	AB		CS 726 Advanced Machine Learning	6.0	MA	AB
CS 316 Implementation of Programming Languages Lab	4.0	MA	AA BOM		MA 214 Introduction to Numerical Analysis	8.0 OHNOL	MA	BOMB
CS 344 Artificial Intelligence STITUTE OF TEC	6.0	OCMA	AA		भारतीय पौद्योगिको संस्थान मुंबई INDIAN INSTITUTE OF TEC			
SPI=9.12/10 APPRINTED INDIAN INSTITUTE OF TEC					CPI=8.69/10 Elegan gas INDIAN INSTITUTE OF TE			BOMB BOMB

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Verification Ticket Number: 73 1677 3152 0805 2636



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INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

पवई / Powai, मुंबई / Mumbai 400 076



Code ् Name कंट्यान मंबई INDIAN INSTITUTE OF TE	Credit	s Tag	Grade	Code	Name: The Park House INDIAN INSTITUTE C	F TE Cr	edits	Tag	Grade
मारतीय प्रौद्योगकी अस्थान मुंबई INDIAN INSTITUTE OF 🛣	ademic Y	ear: 2	2018 - 20	019, Ter	m: Semester Autumn AN NS N C	FTECH	HNOLC	GY I	вомв
CS 492 BTP I	6.0	OGMA	BAMBA	EE 746	Neuromorphic Engineering		6.0	MA	AB
CS 742 Foundations of Network Security and	CHNOL	Обно Обу	BBB/BA BOMBA	ES 200	Environmental Studies: Science and Engineering		3.0	MA	BOMB
CS 747 Foundations of Intelligent and Learning Agents	CHNOL	GHO OGY	BBMBA BOMBA	γ HS 200 Υ	Environmental Studies No THOMAS		13.0 MOLC	MA GY	BOMB
SPI=8.50/10 applied and INDIAN INSTITUTE OF TE				CPI=8	.67/10 AND THE INDIAN INSTITUTE C				
MATINIA DI BIRINIA MAZINIA NA BARRANIA DE LA CONTRA DEL CONTRA DE LA CONTRA DE LA CONTRA DE LA CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DE LA CONTRA DE LA CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DEL CONTRA DE LA CONTRA DE L	ademic Y	ear: 2	2018 - 20	019, Ter	m: Semester Spring	TECH	INOLO	AGY I	BOMB
CL 603 Optimization	6.0	MA	AB	CS 496	BTP II		12.0	НО	AB
CS 490 R & D Project	6.0	MA	BAA BA	CS 728	Organization of Web Information		6.0	MA	AB
SPI=9.33/10 GRIN WAS INDIAN INSTITUTE OF I				CPI=8	,72/10 AUDIAN INSTITUTE C				
Mandatory Course Credits (MA)	CHNOL.	= 268	BOMBA 8.0	Overal	L CPI	FIECE	HNOLC	8.72	/10
Overall Credits Completed		= 292	.0						
Overall Grade Points		= 254	0.0						

The student has completed the academic requirements of the programme in the month of June 2019 for the award Bachelor of Technology in Computer Science and Engineering with Honours Signature & Seal of Transcript Issuing Authority:

Joint/Assistant Registrar (Academic), IIT Bombay

Date: 30-July-2019 सहायक कुलनचित्र (शैक्षिक) Mumbais. Assistant Registrar (Academic)

भारतीय प्रौद्योगिकी संस्थान, मुंबई General Information Institute of Technology, Bombay

The medium of instruction at the instruction at the

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.

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Letter Grade संस्थान मुंबई INDIAN INSTITUTE	APTE	AANOL	AB	BB		CC	CD	DDSIN	FF	FR	WIE	DX TE	PPNO	NPGY	AUMB)
Numerical Equivalent INDIAN INSTITUTE	10 TE	10	9) GY	8)MB	7 / HR.c	6 yran(5	4 3 IN	OAN	OSTI	UTE.	OF TE	SHNO	-OGY	BOMB/

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 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.

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.

Roll Number: 150050084 END OF TRANSCRIPT

Page: 2/2 Verification Ticket Number: 73 1677 3152 0805 2636 Online Verification URL: https://portal.iitb.ac.in/verify



भारतीय प्रौद्योगिकी संस्थान मुंबई

वर्षित श्रीरामदास

को एतद्द्वारा संगणक विज्ञान एवं अभियांत्रिकी में आनर्स सहित

प्रौद्योगिकी स्नातक

की उपाधि प्रदान करता है।

अभिषद की अनुशंसा पर संस्थान की मुद्रांकित यह उपाधि विनियमों में विहित पाठयक्रमों को सफलता पूर्वक पूर्ण कर लेने पर मुंबई, भारतीय गणराज्य में आज 10 अगस्त, 2019 को दी गई है।

Indian Institute of Technology Bombay

upon recommendation of the Senate hereby confers the degree of

Bachelor of Technology

in Computer Science and Engineering with Honours on

VARSHITH SREERAMDASS

who has successfully completed the courses of study as prescribed under the regulations.

Given this day, under the seal of the Institute at Mumbai in the Republic of India, the 10th day of August 2019.



कुलसचिव

Registrar

Schali

अध्यक्ष, अभिषद एवं अध्यक्ष, शासी मंडल Chairperson, Senate and Chairman, Board of Governors URL: https://portal.iitb.ac.in/verify Verification Ticket Number: E0 9246 8353 1464 6577 Certified ORIGINAL Degree

/Jt. Registrar (Academic)

IIT Bombay, Powai, Mumbai-76.

