



भारतीय प्रौद्योगिकी संस्थान मुंबई
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
पवई / Powai, मुंबई / Mumbai 400 076



Roll Number: 22B1230
Name of the Student: Arin Prashant Weling
Programme: Bachelor of Technology (B.Tech.)

Academic Unit: Electrical Engineering
Joining Month & Year: October 2022

Code	Name	Credits	Tag	Grade/ Marks	Code	Name	Credits	Tag	Grade/ Marks
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Academic Year: 2022 - 2023, Term: Semester Autumn

BB 101	Biology	6.0	MA	AA	GC 101	Gender in the workplace	0.0	MA	PP
CH 105	Organic & Inorganic Chemistry	4.0	MA	AA	MA 109	Calculus I	4.0	MA	AB
CH 107	Physical Chemistry	4.0	MA	AP	MA 111	Calculus II	4.0	MA	AB
CH 117	Chemistry Lab	3.0	MA	AA	MS 101	Makerspace	8.0	MA	AA
EE 103	Introduction to Electrical Engineering	6.0	MA	AA	NOC501	NCC/NSS/NSO	0.0	MA	PP

SPI=9.79/10

CPI=9.79/10

Academic Year: 2022 - 2023, Term: Semester Spring

CS 101	Computer Programming and Utilization	6.0	MA	AA	PH 111	Introduction to classical Physics	4.0	MA	AA
EE 114	Power Engineering - I	6.0	MA	AA	PH 112	Introduction to Quantum Physics	4.0	MA	AA
HS 110	Introduction to Psychology	4.0	MA	AA	PH 117	Physics Lab	3.0	MA	AA
MA 106	Linear Algebra	4.0	MA	AB	SOM101	Introduction to Management	4.0	MA	AA
MA 108	Differential Equations	4.0	MA	AB	TA 101	Teaching Assistant Skill Enhancement & Training (TASET)	0.0	MA	PP
NOC502	NCC/NSS/NSO	0.0	MA	PP					

SPI=9.79/10

CPI=9.79/10

Academic Year: 2023 - 2024, Term: Semester Autumn

DS 203	Programming for Data Science	6.0	MI	AB	EE 224	Digital Systems	6.0	MA	AA
EC 101	Economics	6.0	MA	AA	EE 229	Signal Processing - I	6.0	MA	AB
EE 204	Analog Circuits	6.0	MA	AA	EE 325	Probability and Random Processes	6.0	MA	AB
EE 214	Digital Circuits Lab	3.0	MA	AB	EE 691	R & D Project	6.0	HO	CC

SPI=9.55/10

CPI=9.72/10

Academic Year: 2023 - 2024, Term: Semester Spring

DE 250	Design Thinking for Innovation	6.0	MA	AA	EE 240	Power Engineering Lab	3.0	MA	AA
DS 303	Introduction to Machine Learning	6.0	MI	BC	EE 302	Control Systems	6.0	MA	BB
EE 207	Electronic Devices & Circuits	6.0	MA	BC	EE 309	Microprocessors	6.0	MA	AA
EE 230	Analog Lab	3.0	MA	AA	EE 337	Microprocessors Laboratory	3.0	MA	AA
EE 238	Power Engineering - II	6.0	MA	AA					

SPI=9.23/10

CPI=9.59/10

Academic Year: 2024 - 2025, Term: Semester Autumn

CS 663	Fundamentals of Digital Image Processing	6.0	MI	BB	EE 341	Communication Systems - I	6.0	MA	AB
EE 236	Electronic Devices Lab	3.0	MA	AB	EE 353	Introduction to Data Science and Machine Learning	6.0	MA	AA
EE 301	Electromagnetic Waves	6.0	MA	AA	EE 678	Wavelets	6.0	HO	BB
EE 324	Control Systems Lab	3.0	MA	AA	HS 436	Indian Culture and Tradition	6.0	MA	AB
EE 340	Communications Lab	3.0	MA	BB					

SPI=9.36/10

CPI=9.55/10

Academic Year: 2024 - 2025, Term: Semester Spring

CS 773	Computer Architecture for Performance and Security	6.0	MA	AB	EE 706	Communication Networks	6.0	MA	AB
DE 338	Introduction to Animation	6.0	MA	AB	EE 739	Processor Design	6.0	MA	AA
EE 344	Electronic Design Lab	6.0	MA	AA	SC 651	Estimation on Lie Groups	6.0	MA	AA
EE 350	Technical Communication	6.0	MA	AB					

SPI=9.43/10

CPI=9.53/10

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Name of the Student: Arin Prashant Weling

Roll Number : 22B1230

Code	Name	Credits	Tag	Grade/ Marks	Code	Name	Credits	Tag	Grade/ Marks
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Academic Year: 2025 - 2026, Term: Semester Autumn

BB 638	Topics in Evolution	6.0	MA	AA	EE 491	BTP I	6.0	MA	AA
CM 617	Sustainability Principles and Practices	6.0	MA	AA	ES 250	Environmental Studies : Science and Engineering	3.0	MA	PP
CS 747	Foundations of Intelligent and Learning Agents	6.0	MI	BC	HS 250	Environmental Studies	3.0	MA	PP
CS 781	Formal Methods in Machine Learning	6.0	MI	AB	URA 01	Undergraduate Research Awards	0.0	MA	PP
DE 349	Immersive Art in VR	6.0	MA	AA					

SPI=10.00/10

CPI=9.57/10

Academic Year: 2025 - 2026, Term: Semester Spring

EE 492	BTP II	12.0	MA	AA	EE 656	Electrical Machine Analysis and Control	6.0	HO	AB
EE6106	Online Learning and Optimisation	6.0	AL	W	GNR649	Planetary Sciences: Earth and Beyond	6.0	MA	AB
EE 622	Optimal Control Systems	6.0	HO	BB	SC 627	Motion Planning & Coordination of Autonomous Vehicles	6.0	MA	AA

SPI=9.75/10

CPI=9.59/10

Mandatory Course Credits (MA)	= 273.0	Overall CPI	= 9.59/10
Overall Credits Completed	= 327.0		
Overall Grade Points	= 3044.0		

Final Result

The student has completed the academic requirements of the programme in the month of May 2026 for the award of Bachelor of Technology in Electrical Engineering with Honours and with Minor in Artificial Intelligence and Data Science

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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	BB	BC	CC	CD	DD	FF	FR	W	DX	PP	NP	AU
Numerical Equivalent	10	10	9	8	7	6	5	4	0	0					

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 $C_1, C_2, \dots, C_n$, with grade points of $G_1, G_2, \dots, G_n$ respectively, then

Semester Credits = $C_1 + C_2 + \dots + C_n$	Semester Grade Points = $C_1G_1 + C_2G_2 + \dots + C_nG_n$	SPI = Semester Grade Points / Semester Credits
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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.

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END OF TRANSCRIPT

Roll Number: 22B1230

