



**भारतीय प्रौद्योगिकी संस्थान धारवाड**  
**INDIAN INSTITUTE OF TECHNOLOGY DHARWAD**  
 धारवाड / Dharwad, / कर्नाटक / Karnataka 580 011



Date of Issue : 30-November-2023 , liable to change since student has not yet graduated

Roll Number: 200020005  
 Name of the Student: AKASH POPTANI  
 Programme: Bachelor of Technology (B.Tech)

Academic Unit: Electrical Engineering  
 Joining Month & Year: November 2020

Code	Name	Credits	Tag	Grade	Code	Name	Credits	Tag	Grade
Academic Year: 2020 - 2021, Term: Semester Autumn									
BB 101	Essential Biology for Engineers	6.0	MA	AB	ME 111	Engineering Graphics Lab	5.0	MA	BB
CH 101	Chemistry for Engineers: Fundamental concepts and Applications	8.0	MA	AB	ME 113	Hands on Engineering Lab	3.0	MA	AB
CH 111	Chemistry Lab	3.0	MA	AA	PH 101	Quantum Physics and Applications	6.0	MA	BC
MA 101	Calculus	8.0	MA	AA					
SPI=8.85/10					CPI=8.85/10				
Academic Year: 2020 - 2021, Term: Semester Spring									
CS 101	Computer Programming	8.0	MA	AA	MA 103	Differential Equations I	4.0	MA	AA
EE 101	Introduction to Electrical Systems and Electronics	6.0	MA	AB	PH 102	Electricity and Magnetism	6.0	MA	AB
MA 102	Linear Algebra	4.0	MA	AB	PH 111	Physics Laboratory	3.0	MA	AB
SPI=9.39/10					CPI=9.09/10				
Academic Year: 2021 - 2022, Term: Semester Autumn									
CS 203	Discrete Structures	6.0	MA	AB	EE 227	Data Analysis	3.0	MA	AB
EE 202	Introduction to Analog Circuits	3.0	MA	AB	EE 229	Electronic Devices	3.0	MA	AB
EE 205	Network Theory	6.0	MA	AB	HS 201	Economics	6.0	MA	AB
EE 210	Signals and Systems	6.0	MA	AB	MA 201	Complex Analysis	4.0	MA	BB
EE 221	Introduction to Probability	3.0	MA	AB	MA 203	Differential Equations-II	4.0	MA	AA
SPI=9.00/10					CPI=9.05/10				
Academic Year: 2021 - 2022, Term: Semester Spring									
EE 204	Digital Systems	6.0	MA	AA	EE 216	Communications Lab	2.0	MA	BC
EE 206	Introduction to Electrical Machines	3.0	MA	AA	EE 223	Introduction to Power Systems	3.0	MA	AB
EE 208	Engineering Electromagnetics	3.0	MA	CC	EE 226	Control Systems and Laboratory	6.0	MA	AB
EE 209	Introduction to Power Electronics	3.0	MA	BB	EE 309	Introduction to Communication Systems	3.0	MA	BC
EE 212	Devices and Circuits Laboratory	3.0	MA	AB	NO 101	National Sports Organisation	0.0	MA	PP
EE 214	Digital Circuits Lab	3.0	MA	AA					
SPI=8.71/10					CPI=8.97/10				
Academic Year: 2022 - 2023, Term: Semester Autumn									
CS 301	Computer Architecture	6.0	MA	AB	EE 321	Digital Signal Processing	3.0	MA	CC
CS 311	Computer Architecture Lab	3.0	MA	AA	EE 325	Microprocessors and Microcontrollers	6.0	MA	AA
EE 311	Electrical Machines and Power Electronics Lab	3.0	MA	BB	EE 331	Research and Development Project	6.0	MA	AA
EE 315	Digital Signal Processing Lab	2.0	MA	BB	HS 102	Design Thinking and Creativity	1.0	MA	PP
EE 319	Microprocessors and Microcontrollers Laboratory	3.0	MA	BB	HS 304	Intellectual Property Management	6.0	MA	AB
SPI=8.95/10					CPI=8.97/10				
Academic Year: 2022 - 2023, Term: Semester Spring									
CE 301	Environmental Studies	6.0	MA	BC	EE 447	Introduction to Electric Vehicle Architecture	3.0	MA	BB
CS 632	Runtime Verification	6.0	MA	AA	EE 610	VLSI Design	6.0	MA	AB
EE 314	Electronic Design Lab	6.0	MA	AB	HS 420	Introduction to Literature	6.0	MA	AB
EE 333	Research and Development Project II	6.0	MA	AA					
SPI=8.92/10					CPI=8.96/10				

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॥ सा विद्या या विमुक्तये ॥  
भारतीय प्रौद्योगिकी संस्थान धारवाड  
Indian Institute of Technology Dharwad

# भारतीय प्रौद्योगिकी संस्थान धारवाड

## INDIAN INSTITUTE OF TECHNOLOGY DHARWAD

धारवाड / Dharwad, / कर्नाटक / Karnataka 580 011



Name of the Student: AKASH POPTANI


Roll Number : 200020005

Code	Name	Credits	Tag	Grade	Code	Name	Credits	Tag	Grade
Academic Year: 2023 - 2024, Term: Semester Autumn									
CS 810	Advanced Computer Architecture	9.0	MA	AA	EE 423	B.Tech. Project EE II	6.0	MA	AB
EE 332	Project in Machine Learning	6.0	MA	AA	HS 101	Introduction to Fine Arts	1.0	MA	PP
EE 407	B.Tech. Project EE	6.0	MA	AA					
SPI=9.78/10					CPI=9.05/10				
Mandatory Course Credits (MA)					Overall CPI				
= 253.0					= 9.05/10				
Overall Credits Completed									
= 253.0									
Overall Grade Points									
= 2289.0									

### Current Status

The academic requirements for the degree are yet to be completed.

Signature & Seal of Transcript Issuing Authority:

  
30/11/2023  
Assistant Registrar (Academic), IIT Dharwad

Date: 30-November-2023 Place: Dharwad

Assistant Registrar (Academics)

Indian Institute of Technology Dharwad

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	FR	W	DX	PP	NP	AU
Numerical Equivalent	10	10	9	8	7	6	5	4	0	-	-	-	-	-

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

$$\text{Semester Credits} = C_1 + C_2 + \dots + C_n$$

$$\text{Semester Grade Points} = C_1G_1 + C_2G_2 + \dots + C_nG_n$$

$$\text{SPI} = \text{Semester Grade Points} \div \text{Semester Credits}$$

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, ALO: Additional Learning Opportunities, 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 in mandatory courses (MA) and in additional learning opportunities (ALO) are considered. Provided these ALO courses followed regular grading system followed for mandatory courses.
- 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 Opportunities" (ALO).
- 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 mandatory and additional learning opportunities 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.

END OF TRANSCRIPT

Roll Number: 200020005