



भारतीय प्रौद्योगिकी संस्थान मुंबई^{१९४८}
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
पवई / Powai, मुंबई / Mumbai 400 076



Date of Issue : 12-January-2021 , liable to change since student has not yet graduated

Roll Number: 18I170002

Academic Unit: Energy Science and Engineering

Name of the Student: Brinti Mondal

Joining Month & Year: July 2018

Programme: M.Sc. & Ph.D. Dual Degree (M.Sc. & Ph.D. Dual Degree)

Code	Name	Credits	Tag	Grade	Code	Name	Credits	Tag	Grade
Academic Year: 2018 - 2019, Term: Semester Autumn									
EN 407	Chemistry for Energy Science	6.0	MA	AB	EN 413	Materials Science for Energy	6.0	MA	AB
EN 409	Mathematical Foundation for Energy Science	6.0	MA	CC	EN 415	Energy Laboratory I	6.0	MA	AA
EN 411	Physics for Energy Science	6.0	MA	CC	EN 417	Computer Programming	6.0	MA	BC
SPI=7.83/10									
CPI=7.83/10									
Academic Year: 2018 - 2019, Term: Semester Spring									
EN 301	Introduction to Renewable Energy Technologies	6.0	MA	BC	EN 418	Introduction to Transport Phenomena	6.0	MA	BC
EN 412	Thermodynamics and Statistical Mechanics	6.0	MA	CC	EN 420	Energy Laboratory II	3.0	MA	AB
EN 414	Methods in Analytical Techniques	8.0	MA	AB	EN 422	Seminar	4.0	MA	AB
EN 416	Basics of Electrical and Electronic Systems	6.0	MA	BC					
SPI=7.62/10									
CPI=7.72/10									
Academic Year: 2019 - 2020, Term: Semester Autumn									
EN 606	Energy Resources, Economics and Environment	6.0	MA	BC	EN 691	M.Sc.-Ph.D. Project I	8.0	MA	AB
EN 618	Energy Systems Modelling & Analysis	6.0	MA	BB	EN 792	Communication Skills -II	4.0	MA	PP
EN 632	Waste to Energy	6.0	MA	BB	HS 791	Communication Skills -I	2.0	MA	PP
EN 655	Energy Laboratory III	3.0	MA	AB	MM 717	Electrochemical Materials Science in Energy Storage	6.0	MA	AB
SPI=8.31/10									
CPI=7.91/10									
Academic Year: 2019 - 2020, Term: Semester Spring									
EN 610	Hydrogen Energy	6.0	MA	CC	EN 692	M.Sc.-Ph.D. Project II	8.0	MA	AA
EN 612	Non-conventional Energy Systems Lab.	3.0	MA	AB	MM 684	X-Ray Diffraction and Electron Microscopy	6.0	MA	BB
EN 658	Electrochemical Energy Storage	6.0	MA	AB	MM 700	Electrochemical and Materials Perspective in Energy Storage	6.0	MA	AB
SPI=8.54/10									
CPI=8.06/10									
Academic Year: 2020 - 2021, Term: Semester Autumn									
FN 693	M.Sc.-Ph.D. Project III	24.0	MA	AA	MM 732	Structural Characterization of Materials	3.0	MA	AA
ES 505	Health, Safety and Environment	6.0	MA	AA	MM 735	Material Characterization at High Temperatures	3.0	MA	AA
SPI=10.00/10									
CPI=8.45/10									
Mandatory Course Credits (MA)									
= 181.0									
Overall Credits Completed									
= 181.0									
Overall Grade Points									
= 1529.0									
Overall CPI									
= 8.45/10									

Current Status

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

Signature & Seal of Transcript Issuing Authority:

Joint/Assistant Registrar (Academic), IIT Bombay

Date: 12-January-2021
Place: Mumbai

Mr. Brinti Mondal
Brinti Mondal
M.Sc. & Ph.D. Dual Degree
IIT Bombay, Mumbai



CONTINUED



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



Name of the Student: Brinti Mondal

Roll Number: 18I170002

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 = $C_1 G_1 + C_2 G_2 + \dots + C_n G_n$	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.
- The research work related to Ph.D. thesis is mentioned as Thesis Research. It does not carry a course number, credits, or grade.

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: 18I170002