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

Official Transcript

Name of the Student: Digbalay Bose — Roll Number : 143070026

Code	Name	Credits	Tag	Grade	Code	Name	Credits	Tag	Grade

Academic Year: 2015 - 2016, Term: Semester Summer

EE 798	II Stage Project	42.0	PR	AA

SPI = 10.00/10

CPI (Coursework) = 8.89/10
CPI (Overall) = 9.51/10

Mandatory Course Credits (MA)	= 70.0	CPI (Courses)	= 8.89/10
Project Credits (PR)	= 90.0	CPI (Project)	= 10.00/10
Net Mandatory Credits (MA+PR)	= 160.0	CPI (Net)	= 9.51/10
Overall Completed Credits	= 160.0		
Overall Grade Points	= 1522.0		

Final Result

The student has completed the academic requirements of the programme in the month of June 2016 for the award of
Master of Technology in Electrical Engineering with Specialization in Control and Computing

Signature & Seal of Transcript Issuing Authority:

INSTITUTE OF TECHNOLOGY POWAI MUMBAI 76.

Joint/Assistant Registrar (Academic), IIT Bombay
Date: 01-November-2017
Place: Mumbai

Asstt. Registrar (Academic)
Indian Institute of Technology Bombay
Powai, Mumbai - 400 076.

General Information

The medium of instruction at the Institute is English.

Course credits and grade: Each academic course is associated with a credit which is an indicator of its relative academic 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FF: Fail, FR: Fail and repeat, W: Withdrawn, DX: Insufficient attendance, AU: Satisfactory performance in an audit course, PP: Pass, NP: Not Pass.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 $C_1, C_2, \ldots, C_n$, with grade points of $G_1, G_2, \ldots, G_n$ respectively, then

Semester Credits = $C_1 + C_2 + \ldots + C_n$. Semester Grade Points = $C_1G_1 + C_2G_2 + \ldots + C_nG_n$. 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.

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 for students graduating in June, 2016 onwards.

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: 143070026

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Official Transcript

Roll Number:	143070026	Academic Unit:	Electrical Engineering
Name of the Student:	Digbalay Bose	Discipline/Specialization:	Control and Computing
Programme:	Master of Technology (M.Tech)	Joining Month & Year:	July 2014

Code	Name	Credits	Tag	Grade	Code	Name	Credits	Tag	Grade
Academic Year: 2014 - 2015, Term: Semester Autumn									
EE 613	Nonlinear Dynamical Systems	6.0	MA	AB	EE 677	Foundation of VLSI CAD	6.0	MA	AB
EE 615	Control and Computational Laboratory	6.0	MA	AB	EE 694	Seminar	4.0	MA	AA
EE 635	Applied Linear Algebra	6.0	MA	AB	EE 792	Communication Skills -II	4.0	MA	PP
EE 640	Multivariable Control Systems	6.0	MA	AA	HS 791	Communication Skills -I	2.0	MA	PP
SPI= 9.29/10					CPI= 9.29/10				
Academic Year: 2014 - 2015, Term: Semester Spring									
EE 622	Optimal Control Systems	6.0	MA	AA	EE 714	Behavioral Theory of Systems	6.0	MA	AB
EE 636	Matrix Computations	6.0	MA	BC	EE 720	An Introduction to Number Theory and Cryptography	6.0	AU	AU
EE 678	Wavelets	6.0	MA	AB					
SPI= 8.75/10					CPI= 9.07/10				
Academic Year: 2015 - 2016, Term: Semester Project									
EE 797	I Stage Project	48.0	PR	AA					
SPI = 10.00/10		CPI (Coursework) = 9.07/10 CPI (Overall) = 9.49/10							
Academic Year: 2015 - 2016, Term: Semester Autumn									
CS 663	Fundamentals of Digital Image Processing	6.0	AU	AU	EE 717	Advanced Computing for Electrical	6.0	AU	AU
EE 610	Image Processing	6.0	MA	BB					
SPI= 8.00/10					CPI= 8.97/10				
Academic Year: 2015 - 2016, Term: Semester Spring									
CS 725	Foundations of Machine Learning	6.0	AU	AU	ME 766	High Performance Scientific Computing	6.0	MA	BB
EE 702	Computer Vision	6.0	AU	AU					
SPI= 8.00/10					CPI= 8.89/10				

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