

SCHOOL OF MECHANICAL ENGINEERING
KIIT, DEEMED TO BE UNIVERSITY, BHUBANESWAR-24

21-04-2019

NOTESHEET

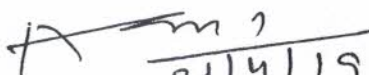
**Sub: Approval of course curricula and syllabi for B.Tech, 2018
admitted batch**

The course curricula and detailed syllabus for B.Tech, 2018 admitted batch students are prepared for four programme i.e.


- A. B.Tech, Mechanical Engineering
- B. B.Tech, Mechanical Engineering (Automobile)
- C. B.Tech, Mechatronics Engineering
- D. B.Tech, Aerospace Engineering

A meeting of the Board of Studies of School of Mechanical Engineering was convened on 13th April 2019 and the detailed course structures and syllabus for above programmes were approved. The views of the board members was also sought and incorporated while finalizing the structures and syllabus. The minutes of BOS along with the detailed course curricula and syllabi for above four programmes are attached herewith for kind reference.

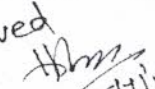
This is placed for your kind consideration and necessary approval please.


Dr A.K. Sahoo
21/4/19

Dean, SME
Dean
School of Mechanical Engineering
Kalinga Institute of Industrial Technology
Deemed to be University, Bhubaneswar

Registrar forwarded 
20/04/19

Vice-Chancellor

I have checked the course structure and syllabi. This may kindly be approved. 
20/04/2019

**SCHOOL OF MECHANICAL ENGINEERING
KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)
Deemed to be University**

BOARD OF STUDIES MEETING

MINUTES OF MEETING

The school level Board of Studies meeting was convened on 13th April 2019, 11.00AM at Conference Hall, SME to review the course structure and detail syllabi for all B. Tech in Mechanical, Mechanical (Automobile) and Mechatronics Engineering programmes for 2018 admitted batch.

Members Present

Prof. B.B. Biswal, Director, NIT Meghalaya
 Prof. Ranjit Kumar Sahoo, Professor, NIT Rourkela
 Prof. R. K. Paramaguru, Professor
 Prof. S. Singh, Professor
 Prof. K.B.Sahu, Professor
 Prof. S. Tripathy, Professor
 Prof. L. K. Pothal, Professor
 Prof. T. Mohanty, Professor
 Prof. Mrutyunjay Jena, Asso. Professor
 Prof. P. Chandrasekhar, Asso. Professor
 Prof. Prakash Ghose, Asst. Professor
 Prof. Ajaya Kumar Behera, Asst. Professor
 Prof. B. C. Routara, Professor
 Prof. A. K. Sahoo, Professor
 Prof. J.K.Das, Faculty, Electronics Engineering
 Prof. Purna Ch. Mishra, Professor

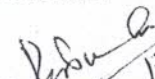
External member


External member
 Member
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 Chairman
 Co-Chairman
 Invited Member
 Convener

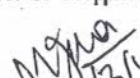
The course structure was reviewed and suitable modifications have been incorporated.

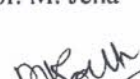
The new course structures and detail syllabi prepared for B. Tech. Mechanical, Mechanical (Automobile) and Mechatronics Engineering programmes have been approved (enclosed as Annexures).

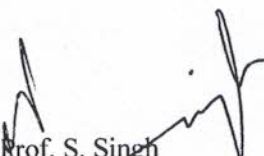

 Prof. B.B. Biswal 13/4/19

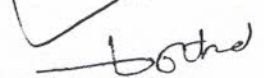

 Prof. R. K. Paramaguru 13/4/19

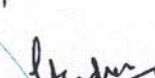

 Prof. S. Tripathy 13/4/19

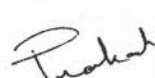

 Prof. M. Jena 13/4/19

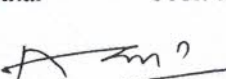

 Prof. B. C. Routara 13/04/2019

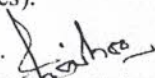

 Prof. S. Singh

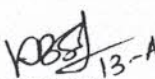

 Prof. L. K. Pothal



 Prof. P. Chandrasekhar 13/4/19

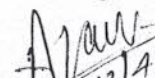

 Prof. P. Ghose 13/4/19

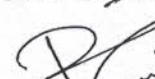

 Prof. A. K. Sahoo


 Prof. R. K. Sahoo


 Prof. K.B.Sahu 13-Apr-19


 Prof. T. Mohanty 13-04-19


 Prof. A. K. Behera 13/4/19


 Prof. Purna Ch. Mishra

COURSE STRUCTURE FOR B. TECH IN MECHATRONICS ENGINEERING
SEMESTER 1

Type	Sl. No	Subject Code	Course Title	L	T	P	Total	Credit
Theory								
BS	1	MA 1003	Mathematics-I	3	1	0	4	4
BS	2	PH 1007	Physics	3	1	0	4	4
ES	3	EE 1003	Basic Electrical Engineering	3	0	0	3	3
ES	4	ME 1003	Engineering Mechanics	3	0	0	3	3
Practical								
BS	1	PH 1097	Physics Lab	0	0	3	3	1.5
ES	2	EE 1093	Basic Electrical Engineering Lab	0	0	2	2	1
Sessional								
ES	3	ME 1083	Basic Manufacturing Systems	0	1	2	3	2
BS	4	CH 1081	Environmental Science	0	0	2	2	1
Semester Total							24	19.5

SEMESTER 2

Type	Sl. No	Subject Code	Course Title	L	T	P	Total	Credit
Theory								
BS	1	MA 1004	Mathematics-II	3	1	0	4	4
BS	2	CH 1007	Chemistry	3	0	0	3	3
HS	3	HS 1005	Professional Communication	2	0	0	2	2
BS	4	LS 1001	Biology	2	0	0	2	2
Practical								
ES	1	CS 1093	Computer Programming	0	2	4	6	4
BS	2	CH 1097	Chemistry Lab	0	0	3	3	1.5
Sessional								
HS	3	HS 1085	Language Lab	0	0	2	2	1
ES	4	CE 1083	Engineering Graphics	0	1	2	3	2
Semester Total							25	19.5

M.P. Patel *KBS* *Shankar*
Aswani *Pratik* *Phir* *Agar* *Arun*
1-Ghe *Arav*

COURSE STRUCTURE FOR B. TECH IN MECHATRONICS ENGINEERING

SEMESTER- 3

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	MA 2005	Mathematics-III (Civil & Mechanical)	3	1	0	4	4
2	ME 2023	Thermofluids	3	1	0	4	4
3	ME 2013	Kinematics and Dynamics of Machines	3	1	0	4	4
4	EC 2025	Principles of Electronics Engineering	3	0	0	3	3
5	EE 2011	DC, AC and Special Electrical Machines	3	1	0	4	4
Total of Theory						19	19
Practical							
1	ME 2099	Fluid Mechanics Lab	0	0	2	2	1
2	EE 2095	DC, AC and Special Machines Lab	0	0	2	2	1
3	ME 2093	Machine Kinematics and Dynamics Lab	0	0	2	2	1
Sessional							
1	ME 2083	Machine Drawing and Computer Aided Design	0	0	2	2	1
Total of Practical & Sessional						8	4
Semester Total						27	23

SEMESTER-4

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	EI 2008	Introduction to Instrumentation Engineering	3	0	0	3	3
2	ME 2027	Materials Science and Engineering	3	0	0	3	3
3	MH 2002	Principles of Machine Tools	3	0	0	3	3
4	EC 2011	Digital Electronics	3	0	0	3	3
5	ME 2020	Solid Mechanics and Machine Design	3	1	0	4	4
6		HS Elective-I	3	0	0	3	3
Total of Theory						19	19
Practical							
1	EC 2096	Digital and Linear IC Lab	0	0	2	2	1
2	EI 2096	Measurement Lab	0	0	2	2	1
Sessional							
1	ME 2085	Manufacturing Practices	0	1	2	3	2
2	HS 2081	Business Communication	0	0	2	2	1
Total of Practical & Sessional						9	5
Semester Total						28	24

SEMESTER- 5

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	EC 2020	Microprocessors, Microcontrollers and Interfacing	3	1	0	4	4
2	EE 2028	Linear Control System	3	0	0	3	3
3	EI 3007	Sensors and Actuators	3	1	0	4	4
4	EE 3011	Power Electronics and Drives	3	1	0	4	4
5		Department Elective-I	3	0	0	3	3
6		Department Elective-II	3	0	0	3	3
Total of Theory						21	21
Practical							
1	EC 2090	Microprocessor and Microcontroller Lab	0	0	2	2	1
2	EE 3097	Power Electronics and Drives Lab	0	0	2	2	1
3	EI 3097	Sensors and Actuators Lab	0	0	2	2	1
Sessional							
1	ME 3081	Machine Design	0	0	2	2	1
Total of Practical & Sessional						8	4
Semester Total						29	25

SEMESTER - 6

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	MH 3008	Design of Mechatronic systems	3	0	0	3	3
2	MH 3010	Industrial Automation and Robotics	3	1	0	4	4
3		Department Elective-III	3	0	0	3	3
4		Department Elective-IV	3	0	0	3	3
5		Department Elective-V	3	0	0	3	3
6		Open Elective -I / (MI-1)	3	0	0	3	3
Total of Theory						19	19
Practical							
1	MH 3096	PLC and Motion Control Lab	0	0	2	2	1
2	MH 3092	CIM and Robotics Lab	0	0	2	2	1
3	MH 3094	Mechatronics Lab	0	0	2	2	1
Sessional							
1	MH 3082	Minor Project	0	0	4	4	2
Total of Practical & Sessional						10	5
Semester Total						29	24

SEMESTER- 7

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	HS 4001	Professional Practice, Law & Ethics	2	0	0	2	2
2		Open Elective-II / (MI-2)	3	0	0	3	3
3		(MI-3)	(3)	(0)	(0)	(3)	(3)
(4)		(MI-4)	(3)	(0)	(0)	(3)	(3)
(5)		(HO-1)	(3)	(0)	(0)	(3)	(3)
Total of Theory						05	05
Sessional							
1	MH 4081	Project-I/Internship					3
2	MH 4083	Practical Training	-	-	-	-	2
(3)		(Project – Minor / Lab)	(0)	(0)	(4)	(4)	(2)
Semester Total							10

SEMESTER- 8

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1		HS Elective-II	3	0	0	3	3
(2)		(MI-5)	(3)	(0)	(0)	(3)	(3)
(3)		(MI-6)	(3)	(0)	(0)	(3)	(3)
(4)		(HO-2)	(3)	(0)	(0)	(3)	(3)
(5)		(HO-3)	(3)	(0)	(0)	(3)	(3)
Total of Theory						3	3
Sessional							
1	MH 4082	Project-II / Internship					10
Semester Total							13

MI – Minor

HO - Honors

LIST OF HS ELECTIVES

HS Elective – I

Sl. No.	Course Code	Course Title	Credit
1.	HS 2002	Engineering Economics	3
2.	HS 2008	Economic Environment of India	3
3.	HS 2010	Financial Institutions, Markets and Regulations	3
4.	HS 2012	Development Economics	3

HS Elective – II

1.	HS 3006	Entrepreneurship	3
2.	HS 3008	Management Concepts & Practices	3
3.	HS 3002	Organizational Behaviour	3
4.	HS 3004	Human Resource Management	3

LIST OF DEPARTMENT ELECTIVES

Dept. Elective – I

1.	ME 3020	Advanced Manufacturing Processes	3
2.	EL 3022	Advanced Control Systems	3
3.	MH 3032	Modeling and Simulation of Mechatronic Systems	3
4.	MH 3034	Product Design and Development	3
5.	EC 6108	Digital Image Processing	3

Dept. Elective – II

1.	ME 3069	Total Quality Management	3
2.	MH 3035	Process Planning and Cost Estimation	3
3.	EI 3023	Neural Network & Fuzzy Logic Control	3
4.	MH 3037	Micro and Nano Manufacturing System	3
5.	MH 3039	Artificial Intelligence for Mechatronics Systems	3

Dept. Elective - III

1.	MH 3040	Micro Electro Mechanical Systems	3
2.	ME 3028	Supply Chain Management	3
3.	IT 4027	Software Project Management	3
4.	ME 3055	Additive Manufacturing	3
5.	MH 3042	Mobile and Autonomous Robots	3

Dept. Elective – IV

1.	ME 2024	Industrial Engineering and Operations Research	3
2.	MH 3044	Virtual Reality and Haptics	3
3.	ME 3057	Machine Maintenance and Condition Monitoring	3
4.	ME 3051	Finite Element Analysis	3
5.	AE 3001	Automotive Mechatronics	3

Dept. Elective – V

1.	MH 3046	Intelligent Manufacturing Systems	3
2.	ME 3047	Production and Operations Management	3
3.	E1 3022	Bio-Medical Instrumentation	3
4.	ME 3049	Industrial Safety	3
5.	MH 3048	Internet of Things and Smart Manufacturing	3