

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

21-04-2019

NOTESHEET

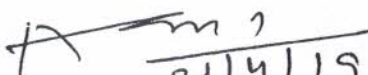
**Sub: Approval of course curricula and syllabi for B.Tech, 2018
admitted batch**

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.

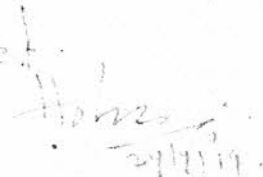
This is placed for your kind consideration and necessary approval please.

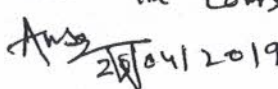
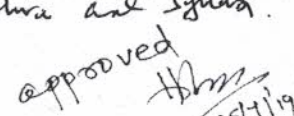

Dr A.K. Sahoo
21/4/19

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

Registrar forwarded 
20/04/19

Vice-Chancellor

Please refer

Chairman (UG)

I have checked the course structure and syllabi. This may kindly
be approved. Ans. 
25/04/2019
approved 
21/4/19

**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

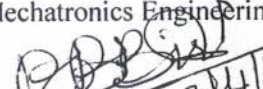
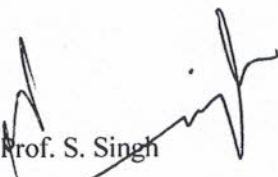
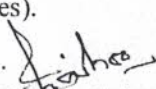
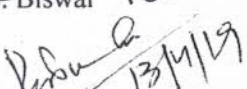
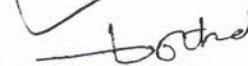
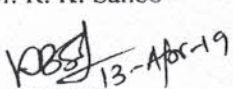
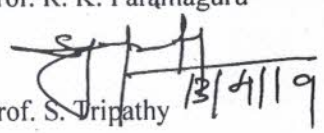
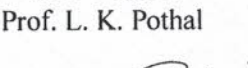
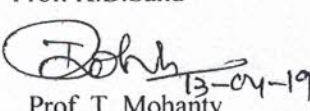

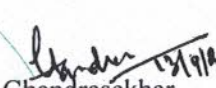
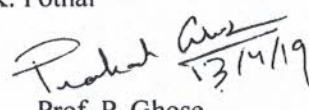
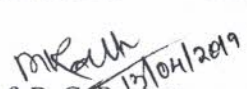
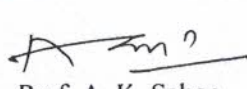
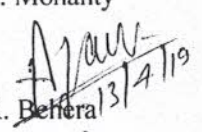


Prof. B.B. Biswal, Director, NIT Meghalaya
 Prof. Ranjit Kumar Sahoo, Professor, NIT Rourkela
 Prof. R. K. Paramaguru, Professor
 Prof. S. Singh, Professor
 Prof. K.B.Sahu, Professor
 Prof. S. Tripathy, Professor
 Prof. L. K. Pothal, Professor
 Prof. T. Mohanty, Professor
 Prof. Mrutyunjay Jena, Asso. 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. S. Singh	 Prof. R. K. Sahoo
 Prof. R. K. Paramaguru 13/4/19	 Prof. L. K. Pothal	 Prof. K.B.Sahu 13-Apr-19
 Prof. S. Tripathy 13/4/19	 Prof. Mrutyunjay Jena	 Prof. T. Mohanty 13-04-19
 Prof. M. Jena 13/4/19	 Prof. P. Chandrasekhar 13/4/19	 Prof. P. Ghose 13/4/19
 Prof. A. K. Sahoo 13/04/2019	 Prof. A. K. Sahoo	 Prof. A. K. Behera 13/4/19
 Prof. B. C. Routara	 Prof. Purna Ch. Mishra	

**COURSE STRUCTURE FOR B. TECH PROGRAM IN
MECHANICAL (AUTOMOBILE) 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

Handwritten signatures and initials:
 KBS, Shachan, P. Cui, An, (Law) (L. Poth), A. S.

**COURSE STRUCTURE FOR B. TECH IN MECHANICAL (AUTOMOBILE)
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 2031	Engineering Thermodynamics	3	1	0	4	4
3	ME 2027	Materials Science and Engineering	3	0	0	3	3
4	ME 2029	Mechanics of Solids	3	1	0	4	4
5	ME 2021	Fluid Mechanics & Hydraulic Machines	3	1	0	4	4
6	EC 2025	Principle of Electronics Engineering	3	0	0	3	3
Total of Theory						22	22
Practical							
1	EC 2095	Electronics Engineering Lab	0	0	2	2	1
2	ME 2091	Material Testing Lab	0	0	2	2	1
3	ME 2097	Fluid Mechanics and Hydraulic Machines 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						30	26

SEMESTER - 4

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	ME 2010	Basic Manufacturing Processes	3	0	0	3	3
2	ME 2013	Kinematics and Dynamics of Machines	3	1	0	4	4
3	ME 2022	Internal Combustion Engines and Gas Turbines	3	0	0	3	3
4	AE 2002	Automotives, Suspension and Transmission System	3	0	0	3	3
5	AE 2004	Automotive Mechatronics	3	0	0	3	3
6		HS Elective-I	3	0	0	3	3
Total of Theory						19	19
Practical							
1	ME 2093	Machine Kinematics and Dynamics Lab	0	0	2	2	1
2	AE 2092	Automotive Electrical and Electronics 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	ME 3021	Heat Transfer	3	1	0	4	4
2	ME 3023	Design of Machine Elements-I	3	0	0	3	3
3	ME 3019	Manufacturing Processes and Automation	3	1	0	4	4
4		Department Elective-I	3	0	0	3	3
5		Department Elective-II	3	0	0	3	3
6		Department Elective-III	3	0	0	3	3
Total of Theory						20	20
Practical							
1	ME 3095	Heat Transfer Lab	0	0	2	2	1
2	ME 3093	Computational Techniques Lab	0	0	2	2	1
Sessional							
1	ME 3081	Machine Design	0	0	2	2	1
Total of Practical & Sessional						06	03
Semester Total						26	23

SEMESTER - 6

Sl. No	Course Code	Course Title	L	T	P	Total	Credit
Theory							
1	AE 3002	Vehicle Maintenance	3	0	0	3	3
2	AE 3003	Electrical and Hybrid Vehicle Technology	3	0	0	3	3
3	AE 3004	Design of Automotive Components	3	1	0	4	4
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	AE 3092	IC Engine and Vehicle Maintenance Lab	0	0	2	2	1
2	ME 3096	Mechanical Engineering Lab	0	0	2	2	1
Sessional							
1	AE 3082	Minor Project	0	0	4	4	2
2	ME 3086	Computer Aided Design and Analysis	0	0	2	2	1
Total of Practical & Sessional						10	05
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						5	5
Sessional							
1	AE 4081	Project-I/Internship					3
2	AE 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	AE 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 3071	Renewable Energy Technology	3
2.	ME 3073	Mechanics of Composite Materials	3
3.	ME 3025	Optimization Techniques	3
4.	ME 3065	Combustion Engineering	3
5.	AE 3011	Fuels and Emission	3
6.	ME 2024	Industrial Engineering and Operations Research	3

Dept. Elective-II

1.	ME 3014	Refrigeration and Air Conditioning	3
2.	ME 3024	Mechanical Vibration and Noise Engineering	3
3.	ME 3051	Finite Element Analysis	3
4.	AE 3021	Tractors and Farm Equipments	3
5.	AE 3022	Two and Three Wheelers	3
6.	AE 3023	Off Road Vehicles	3

Dept. Elective-III

1.	ME 3056	Tribology	3
2.	AE 3031	Simulation of IC Engine	3
3.	AE 3033	Thermal Systems in Automotive	3
4.	AE 3034	Vehicle Dynamics	3
5.	AE 3037	Automotive Aerodynamics	3
6.	AE 3039	Battery Technology	3

Dept. Elective-IV

1.	ME 3028	Supply Chain Management	3
2.	ME 3069	Total Quality Management	3
3.	ME 3030	Product Life Cycle Management	3
4.	AE 3042	Automotive Safety and Lighting	3
5.	AE 3044	Theory And Design of Jigs And Fixtures	3

Dept. Elective-V

1.	ME 3059	Computational Fluid Dynamics	3
2.	AE 3052	Intelligent Vehicle Technology	3
3.	AE 3054	Design of Racing Car	3
4.	AE 3056	Fundamentals of Tyre Technology	3
5.	AE 3058	Assembly Line Automation	3
6.	AE 3060	Vehicle Life Cycle Management	3