



## The ICFAI University, Tripura

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Ref: IUT/ME/2016-17/02

Date: 25/07/2017

### Minutes of the Meeting of the Board of Studies(BOS) held on 25<sup>th</sup> July 2017 at 11:00 AM in Board Room regarding the programme of B.Tech in Mechanical Engineering

Members Present in the meeting -

1. Prof. Biplab Halder, Pro-Vice Chancellor, ICFAI University, Tripura (Chairperson).
2. Dr. P.R. Borthakur (Coordinator, Faculty of Science and Technology, ICFAI University, Tripura).
3. Prof. Subodh Debbarma (HoD, Mechanical Engineering, ICFAI University, Tripura).
4. Prof. Abdur Rahman Al Azad (Internal member, Assistant Professor, Mechanical Engineering, ICFAI University, Tripura).
5. Dr. T. K. Basu ( External member, Retired Professor, IIT Kharagpur), joined through video conferencing.

#### Agenda -

- I. Modification of syllabus for B.Tech in Mechanical Engineering (Programme Code – FST002).
- II. List of elective papers to be included in the aforesaid programme.
- III. Credit distribution for B.Tech in Mechanical Engineering.
- IV. Any other with the approval of the chair.

#### Minutes of meeting -

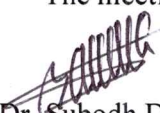
- I. The chairperson welcomed the members and introduced external BOS member to the board and further internal members introduced themselves.
- II. Chairperson advised the coordinator of FST to proceed with the meeting as per the agendas.
- III. The Coordinator, FST verbally informed all the members present in the meeting about the main agenda i.e. to upgrade the B.Tech, Mechanical Engineering Program Structure and directed Dr. Subodh Debbarma, HoD, Mechanical Engineering to elaborate all these modifications through presentation.
- IV. Dr. Subodh Debbarma presented the existing course structure of the ME department and proposed modifications for B.Tech, Mechanical Engineering Program Structure.


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- V. It was unanimously resolved that the modification (refer Annexure I) of the syllabus in the existing programme was approved by the members of BOS and it was decided that the said revision (marked in yellow) will be sent to the Academic Council of the university for the final approval.
- VI. It was resolved that the course-specific outcome and program outcome should be well defined and should get integrated into the current syllabus.
- VII. Regarding the list of elective courses, the list of elective courses was produced by the HoD, ME which would be offered for the programme.
- o Elective Courses for B.Tech in ME programme –


Electives for BTech (ME )					
Sl. No.	Course No	Course Title	L	P	U
1	ME402	Computer Aided Manufacturing	3	0	3
2	ME411	Computational Fluid Dynamics	3	0	3
3	ME412	Cryogenics	3	0	3
4	ME414	Mechatronics	3	0	3
5	ME415	Nanotechnology	3	0	3
6	ME416	Non-Conventional Sources of Energy	3	0	3
7	ME417	Principles of Entrepreneurship	3	0	3
8	ME418	Principles of Tribology	3	0	3
9	ME420	Robotics & Automation	3	3	5
10	ME421	Smart Materials and Devices	3	0	3
11	ME423	Advances in Material Science	3	0	3
12	ME428	Heat Transfer II	3	0	3
13	ME429	Finite Element Methods	3	0	3

- VIII. With regards to the number of credits for courses, all members of the board agreed that each theory course offered by the Mechanical Engineering should be worth 3 credits and each practical course should be worth 2 credits.
- IX. Course codes of a few courses were modified.
- X. The meeting got successfully concluded with a Vote of Thanks from the chairperson.

  
Dr. Subodh Debbarma  
(HoD, ME, FST)

  
Prof. Abdur Rahman Al Azad  
(Internal Member, ME, FST)

  
Dr. P.R. Borthakur  
(Co ordinator, FST)

  
Chairperson  
Board of Studies  
Mechanical Engineering  
Faculty of Science and Technology  
ICFAI University, Tripura

Pro-Vice Chancellor,  
ICFAI University, Tripura.  
Kamalghat, West Tripura.

  
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## Annexure I

Existing program structure of B.Tech in Mechanical Engineering up to July, 2018

### **B.Tech ( Mechanical Engineering ) (Program Code – FST002)**

	SEMESTER I (Total 7)			SEMESTER II (Total 7)		
	Course Code	Course Title	L P U	Course Code	Course Title	L P U
YEAR I	EG111	English Language I	3 0 3	MA 121	Mathematics II	3 0 3
	MA 111	Mathematics I	3 0 3	PH 121	Physics II	3 0 3
	PH 111	Physics I	3 0 3	TA 105	Physical Sciences Lab II	0 2 1
	CH 111	Chemistry	3 0 3	ES 111	Thermodynamics	3 0 3
	TA 104	Physical Sciences Lab I	0 2 1	ES 121	Engineering Mechanics	3 0 3
	TA 101	Engineering Graphics	2 4 4	TA 102	Workshop Practice	2 4 4
	ENV122	Environmental Science	3 0 3	TA 121	C Programming	3 3 4
		Total Units (20)			Total Units (21)	
Summer Term	Course on English Language Skills					
	SEMESTER III (Total 6)			SEMESTER IV (Total 6)		
	Course Code	Course Title	L P U	Course Code	Course Title	L P U
YEAR II	ES212	Structure & properties of materials	3 0 3	ES221	Electric Science-II	3 0 3
	ES211	Electrical Science I	3 0 3	ME221	Applied Thermodynamics	3 0 3
	MA212	Probability and Statistics	3 0 3	ME222	Fluid Mechanics	3 4 5
	ME212	Machine Drawing	1 6 3	ME223	Mechanics of Solids	3 2 4
	TA204	Technical report writing	3 0 3	TA221	Measurement Techniques	2 6 4
	MA211	Mathematics III	3 0 3	MG302	Principles of Economics	3 0 3
	Total Units (18)			Total Units (22)		
Summer Term	IP 201	Internship Program I				0 0 5
YEAR III	SEMESTER V (Total 6)			SEMESTER VI (Total 10)		
	Course Code	Course Title	L P U	Course Code	Course Title	L P U
	MA309	Numerical Methods	3 0 3	ME325T	Machine tools and Metrology	3 0 3
	ME311	Design of Machine Elements	3 0 3	ME325P	Machine tools and Metrology Practical	0 3 2

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	ME312	IC Engines	3 2 4	ME321	Kinematics of Machinery	3 0 3
	ME314	Production Techniques	3 2 4	ME324T	Heat and Mass Transfer	3 0 3
	ME315	Control Systems	3 0 3	ME324P	Heat and Mass Transfer Practical	0 3 2
	ME313	Hydraulics and Hydraulic Machines	3 2 4	ME425	Power plant Engineering	3 0 3
				ME322T	Computer Aided Design	3 0 3
				ME322P	Computer Aided Design Practical	3 0 3
				HS305	Principles of Management	0 3 2
				OC311	Soft Skills	3 0 3
		Total Units (21)			Total Units (26)	
Summer Term	IP 301	Internship Program II				0 0 5
	SEMESTER VII (Total 6)			SEMESTER VIII (Total 7)		
	Course Code	Course Title	L P U	Course Code	Course Title	L P U
	ME323	Dynamics of Machinery and Vibrations	3 0 3	ME401	Production Planning & Control	3 0 3
	ME402	Computer Aided Manufacturing	3 0 3	ME424T	Refrigeration and Air Conditioning	3 0 3
	ME418	Principles of Tribology	3 0 3	ME424 P	Refrigeration and Air Conditioning practical	0 3 2
	ME419	Quality Assurance & Reliability	3 0 3	ME416	Non Conventional Sources of Energy	3 0 3
	ME422	Unconventional Machining	3 0 3	ME426	Automotive Engineering	3 0 3
	ME491	Special Project I	0 0 5	ME492	Special Project-II	0 0 5
				GV404	Grand Viva	0 0 3
		Total Units (20)			Total Units (22)	
YEAR IV						

List of Electives 4th Year Semester-I

Course Code	Course Title	L T P U
ME402	Computer Aided Manufacturing	
ME411	Computational Fluid Dynamics	
ME412	Cryogenics	
ME415	Nanotechnology	

List of Electives 4th Year Semester-II

Course Code	Course Title	L T P U
ME424	Refrigeration and Air-Conditioning	
ME423	Advances in Material Science	
ME416	Non Conventional Sources of Energy	

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ME417	Principles of Entrepreneurship			
ME418	Principles of Tribology			

Revised program structure of B.Tech in Mechanical Engineering with effect from August, 2018

**B.Tech (Mechanical Engineering)**  
(Program Code – FST002)

	SEMESTER I(Total 7)			SEMESTER II(Total 7)		
	Course No	Course Title	L P U	Course No	Course Title	L P U
<b>YEAR I</b>	CH111	Chemistry I	3 0 3	ES111	Thermodynamics	3 0 3
	EGL101	English Language Skill	3 0 3	ES121	Engineering Mechanics	3 0 3
	MA111	Mathematics -I	3 0 3	MA121	Mathematics II	3 0 3
	PH111	Physics - I	3 0 3	PH121	Physics II	3 0 3
	TA101	Engineering Graphics	2 4 4	TA102	Workshop	2 4 4
	TA104	Physical Sciences Lab -I	0 3 1	TA105	Physical Sciences Lab -II	0 3 1
	ENV122	Environmental Science	3 0 3	TA121T	C Programming	3 0 3
				TA121P	C Programming Practical	0 3 2
		<b>Total Units</b>	<b>20</b>		<b>Total Units</b>	<b>22</b>
	<b>SIP101</b>	<b>Summer Internship Program I</b>				<b>0 0 5</b>
	SEMESTER III(Total 8)			SEMESTER IV(Total 9)		
<b>YEAR II</b>	Course No	Course Title	L P U	Course No	Course Title	L P U
	ES211T	Basic Electrical and Electronics Engineering	3 0 3	ECN201	Principles of Economics	3 0 3
	ES 211P	Basic Electrical and Electronics Engineering Practical	0 3 2	MA212	Probability and Statistics	3 0 3
	ES212	Structure & properties of materials	3 0 3	ME221	Applied Thermodynamics	3 0 3
	MA211	Mathematics III	3 0 3	ES222T	Fluid Mechanics	3 0 3
	CS212T	Object oriented Programming through C++	3 0 3	ES223P	Fluid Mechanics Practical	0 3 2
	CS 212P	Object oriented Programming	0 3 2	ES222T	Mechanics of Solids	3 0 3

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		through C <sup>++</sup> Practical				
	ME212	Machine Drawing	1 6 5	ES222P	Mechanics of Solids Practical	0 3 2
	TA204	Technical Report Writing	3 0 3	ME224T	Mechanical Measurement	3 0 3
				ME224P	Mechanical Measurement Practical	0 3 2
		<b>Total Units</b>	<b>24</b>		<b>Total Units</b>	<b>24</b>
<b>Summer Term</b>	<b>SIP201</b>	<b>Summer Internship Program I</b>				<b>0 0 5</b>
<b>YEAR III</b>	SEMESTER V(Total 9)			SEMESTER VI(Total 8)		
	<b>Course No</b>	<b>Course Title</b>	<b>L P U</b>	<b>Course No</b>	<b>Course Title</b>	<b>L P U</b>
	MA309	Numerical Analysis	3 0 3	ME311	Design of Machine Elements	3 0 3
	ME312T	IC engines	3 0 3	ME325T	Machine Tools	3 0 3
	ME312P	IC engines Practical	0 3 2	ME325P	Machine Tools Practical	0 3 2
	ES311T	Hydraulics & Hydraulic Machines	3 0 3	ME324T	Heat and Mass Transfer	3 0 3
	ES311P	Hydr aulics & Hydraulic Machines Practical	0 3 2	ME 324P	Heat and Mass Transfer Practical	0 3 2
	ME314T	Production Techniques	3 0 3	ME326T	Control System Engineering	3 0 3
	ME314P	Production Techniques Practical	0 3 2	ME323	Dynamics of Machinery and Vibrations	3 0 3
	ME321	Kinematics of Machinery	3 0 3		Humanities Elective II	3 0 3
	SSU354	Soft Skills	3 0 2			
			<b>Total Units</b>	<b>23</b>		<b>Total Units</b>
	<b>SIP301</b>	<b>Summer Internship Program III</b>				<b>0 0 5</b>
<b>YEAR  IV</b>	SEMESTER VII(Total 8)			SEMESTER VIII(Total 7)		
	<b>Course No</b>	<b>Course Title</b>	<b>L P U</b>	<b>Course No</b>	<b>Course Title</b>	<b>L P U</b>
	ME411T	Computational Fluid Dynamics	3 0 3	ME 401	Production Planning and Control	3 0 3
	ME419	Quality Assurance & Reliability	3 0 3	ME426	Automotive Engineering	3 0 3

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	ME422	Unconventional Machining	3 0 3	ME423	Advances in Material Science	3 0 3
	ME425	Power Plant Engineering	3 0 3	ME424T	Refrigeration and Air-Conditioning	3 0 3
	ME427T	Metrology	3 0 3	ME424P	Refrigeration and Air-Conditioning Practical	0 3 2
	ME427P	Metrology Practical	0 3 2	ME492	Special Projects II	0 0 5
	ME491	Special Projects I	0 0 5	GV404	Grand Viva	0 0 3
		<b>Total Units</b>	<b>22</b>		<b>Total Units</b>	<b>22</b>

**List of Electives 4th Year Semester-I**

Course Code	Course Title	L P U
ME411	Computational Fluid Dynamics	3 0 3
ME416	Non Conventional Sources of Energy	3 0 3
ME402	Computer Aided Manufacturing	3 0 3
ME412	Cryogenics	3 0 3
ME415	Nanotechnology	3 0 3
ME417	Principles of Entrepreneurship	3 0 3
ME418	Principles of Tribology	3 0 3

**List of Electives 4th Year Semester-II**

Course Code	Course Title	L P U
ME423	Advances in Material Science	3 0 3
ME429	Finite Element Methods	3 0 3
ME420	Robotics & Automation	3 0 3
ME421	Smart Materials and Devices	3 0 3
ME428	Heat Transfer II	3 0 3

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