

B. SC. IN MECHANICAL ENGINEERING
Semester-wise Course and Credit Distribution
SYLLABUS

1ST YEAR 1ST SEMESTER							
S/ N	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
1	ME 1101	Basic Mechanical Engineering	3.0	3.00	--	--	3.00
2	Phy 1101	Physics I	3.0	3.00	--	--	3.00
3	Chem 1101	Engineering Chemistry	3.0	3.00	--	--	3.00
4	Math 1101	Mathematics I	3.0	3.00	-	-	3.00
5	Ban 1101	বাংলা ভাষা ও সাহিত্য (Bengali Language and Literature)	2.0	2.00	--	--	2.00
6	ME 1100	Mechanical Engineering Drawing I	--	--	3.0	1.50	1.50
7	Phy 1102	Physics I Sessional			3.0	1.50	1.50
8	Shop 1100	Foundry and Welding Shops	--	--	2.0	1.00	1.00
9	Chem 1102	Inorganic Quantitative Analysis	--	--	3.0	1.50	1.50
Total=			14.0	14.00	11.0	5.50	19.50

Contact Hours : 14.0 (T) + 11.0 (S) = 25.0 hrs/week
Total Credits : 19.50

Theory Courses : 5
Sessional Courses : 4

N.B.: Any student of 4-year diploma in engineering, willing to obtain exemption of the courses of 1st Year 1st Semester will have to submit an application to the Head of the concerned Department for approval.

1ST YEAR 2ND SEMESTER							
S/ N	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
1	Hum 1201	English Language	3.0	3.00	-	-	3.00
2	Ban 1201	বাংলাদেশের অভ্যুদয়ের ইতিহাস (History of Bangladesh Independence)	2.0	2.00	-	-	2.00
3	EEE 1201	Electrical Engineering and Electronics Technology	4.0	4.00	-	-	4.00
4	Math 1201	Mathematics II	3.0	3.00	-	-	3.00
5	CSE 1201	Computer Programming Language	3.0	3.00	-	-	3.00
6	Hum 1202	English Language Sessional			1.5	0.75	0.75
7	EEE 1202	Electrical Engineering Sessional	--	--	1.5	0.75	0.75
8	CSE 1202	Computer Programming Language Sessional	--	--	3.0	1.50	1.50
9	Shop 1200	Machine Shop Practices	--	--	2.0	1.00	1.00
Total=			15.0	15.00	10.00	4.00	19.00

Contact Hours : 15.0 (T) + 10.0 (S) = 25.0 hrs/week
Total Credits : 19.50

Theory Courses : 5
Sessional Courses : 4

2ND YEAR 1ST SEMESTER							
S/N	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
1	ME 2101	Engineering Mechanics I	3.0	3.00	--	--	3.00
2	Math 2101	Mathematics III	3.0	3.00	--	--	3.00
3	Phy 2101	Physics II	3.0	3.00	--	--	3.00
4	ME 2103	Numerical Analysis for Engineers	3.0	3.00	--	--	3.00
5	Hum 2101	Environmental Protection	2.0	2.00	--	--	2.00
6	Hum 2101	Engineering Economics	2.0	2.00	--	--	2.00
7	ME 2100	Mechanical Engineering Drawing II	--	--	3.0	1.50	1.50
8	EEE 2102	Electronics Technology Sessional	--	--	1.5	0.75	0.75
9	ME 2104	Numerical Analysis Sessional	--	--	3.0	1.50	1.50
Total=			16.0	16.00	7.5	3.75	19.75

Contact Hours : 16.0 (T) + 7.5 (S) = 23.5 hrs/week
Total Credits : 19.75

Theory Courses : 6
Sessional Courses : 3

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2ND YEAR 2ND SEMESTER

S/N	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
1	ME 2201	Engineering Mechanics II	3.0	3.00	--	--	3.00
2	ME 2203	Metallic Materials	3.0	3.00	--	--	3.00
3	ME 2205	Engineering Thermodynamics	3.0	3.00	--	--	3.00
4	Math 2201	Mathematics IV	3.0	3.00	--	--	3.00
5	ME 2207	Mechanics of Solids	3.0	3.00	--	--	3.00
6	Hum 2201	Sociology and Accounting	3.0	3.00	--	--	3.00
7	ME 2204	Metallic Materials Sessional	--	--	1.5	0.75	0.75
8	ME 2206	Engineering Thermodynamics Sessional	--	--	1.5	0.75	0.75
9	ME 2208	Mechanics of Solid Sessional	--	--	2.0	1.00	1.00
Total=			18.0	18.00	5.0	2.50	20.50

Contact Hours : 18.0 (T) + 5.0 (S) = 23.0 hrs/week
Total Credits : 20.50

Theory Courses : 6
Sessional Courses : 3

3RD YEAR 1ST SEMESTER

S/N	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
1	ME 3101	Heat and Mass Transfer	4.0	4.00	--	--	4.00
2	ME 3121	Fluid Mechanics I	3.0	3.00	--	--	3.00
3	ME 3141	Mechanics of Machinery	4.0	4.00	--	--	4.00
4	ME 3143	Instrumentation and Measurement	3.0	3.00	--	--	3.00
5	Hum 3161	Engineering Ethics and Professionalism	2.0	2.00	--	--	2.00
6	ME 3102	Heat and Mass Transfer Sessional	--	--	3.0	1.50	1.50
7	ME 3122	Fluid Mechanics I Sessional	--	--	1.5	0.75	0.75
8	ME 3142	Mechanics of Machinery Sessional	--	--	3.0	1.50	1.50
9	ME 3144	Instrumentation and Measurement Sessional	--	--	3.0	1.50	1.50
Total=			16.0	16.00	10.5	5.25	21.25

Contact Hours : 16.0 (T) + 10.5 (S) = 26.5 hrs/week
Total Credits : 21.25

Theory Courses : 5
Sessional Courses : 4

3RD YEAR 2ND SEMESTER

S/N	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
1	ME 3203	Power Plant Engineering	3.0	3.00	--	--	3.00
2	ME 3223	Fluid Mechanics II	3.0	3.00	--	--	3.00
3	ME 3243	Machine Design	4.0	4.00	--	--	4.00
4	IPE 3231	Manufacturing Processes	3.0	3.00	--	--	3.00
5	IPE 3201	Industrial Management	3.0	3.00	--	--	3.00
6	ME 3224	Fluid Mechanics II Sessional	--	--	2.0	1.00	1.00
7	ME 3244	Machine Design Sessional	--	--	3.0	1.50	1.50
8	IPE 3232	Manufacturing Process Sessional	--	--	2.0	1.00	1.00
Total=			16.0	16.00	7.0	3.50	19.50

Contact Hours : 16.0 (T) + 7.0 (S) = 23.0 hrs/week
Total Credits : 19.50

Theory Courses : 5
Sessional Courses : 3

4TH YEAR 1ST SEMESTER

B. SC. IN MECHANICAL ENGINEERING
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Option	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
C	ME 4101	Internal Combustion Engine	3.0	3.00	--	--	3.00
C	ME 4123	Fluid Machinery	3.0	3.00	--	--	3.00
C	IPE 4103	Measurement and Quality Control	3.0	3.00	--	--	3.00
C	ME 4105	Refrigeration and Building Mechanical System	3.0	3.00	--	--	3.00
Option I	ME 41XX	Select one course from Option I	3.0	3.00	--	--	3.00
C	ME 4102	Heat Engines Sessional	--	--	1.5	0.75	0.75
C	ME 4124	Fluid Machinery Sessional	--	--	2.0	1.00	1.00
C	IPE 4104	Measurement and Quality Control Sessional	--	--	2.0	1.00	1.00
C	ME 4000	Project and Thesis	--	--	6.0	3.00	*3.00
Total=			15.0	15.00	11.5	5.75	20.75

Contact Hours : 15.0 (T) + 11.5 (S) = 26.5 hrs/week

Theory Courses : 5

Total Credits : 20.75

Sessional Courses : 4

* This credit in addition to 3.00 credits of 4th year 2nd semester for project & thesis will be assessed at the end of 4th Year 2nd Semester.

4TH YEAR 2ND SEMESTER

Option	Course Code	Course Title	Theory		Sessional		Total
			Contact hrs/week	Credits	Contact hrs/week	Credits	
C	ME 4201	Automobile Engineering	3.0	3.00	--	--	3.00
C	IPE 4205	Machine Tools	3.0	3.00	--	--	3.00
Option II	ME 42XX	Select 3 courses from Option II	3.0	3.00	--	--	3.00
	ME 42XX		3.0	3.00	--	--	3.00
	ME 42XX		3.0	3.00	--	--	3.00
	ME 42XX		3.0	3.00	--	--	3.00
C	ME 4204	Steam Laboratories Sessional	--	--	2.0	1.00	1.00
C	IPE 4206	Machine Tools Sessional	--	--	1.5	0.75	0.75
C	ME 4000	Project and Thesis	--	--	6.0	3.00	3.00
Total=			15.0	15.00	9.5	4.75	19.75

Contact Hours : 15.0 (T) + 4.75 (S) = 19.75 hrs/week

Theory Courses : 5

Total Credits : 19.75

Sessional Courses : 3

OPTIONAL-I

Course Code	Course Title	Contact hrs/week	Credits
ME 4107	Renewable Energy	3.0	3.00
ME 4109	Aerodynamics	3.0	3.00
ME 4111	Robotics	3.0	3.00
ME 4113	Control Engineering	3.0	3.00
ME 4115	Petroleum Engineering	3.0	3.00
ME 4117	Noise and Vibration	3.0	3.00
ME 4119	Mechatronics	3.0	3.00

OPTIONAL-II

Course Code	Course Title	Contact hrs/week	Credits
ME 4205	Energy & Environment	3.0	3.00
ME 4207	Composite Materials	3.0	3.00
ME 4209	Flight Dynamics	3.0	3.00
ME 4211	Bioengineering	3.0	3.00
ME 4213	Nuclear Engineering	3.0	3.00
ME 4215	Gas Dynamics	3.0	3.00
ME 4217	Fluidics	3.0	3.00
ME 4219	Design of Fluid Machines	3.0	3.00
EEE 4221	Electrical Machines	3.0	3.00