

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY (U.I.E.T)**  
**(A Constituent Autonomous Institute and Recognized by UGC under Section 12 (B) and 2 (f)); AICTE Approved; TEQIP-III)**  
Kurukshetra University, Kurukshetra (K.U.K) – 136119, Haryana, INDIA  
**(Established by the state Legislature Act XII of 1956; ‘A+’ Grade, NAAC Accredited)**  
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**A. Definition of Credit:**

1 Hour Lecture (L) per week	1 credit
1Hour Tutorial (T) per week	1 credit
1 Hour Practical (P) per week	0.5 credit
2 Hours Practical (Lab) per week	1 credit

**B. Range of Credits:**

A total credit of 160 is required for a student to be eligible to get Under Graduate degree in **Mechanical Engineering**. A student will be eligible to get Under Graduate degree (**B.Tech.**) **with Honours**, if he/she completes an additional 20 credits. These could be acquired through MOOCs at Swayam portal or with in-house examination being conducted. In order to have an Honours degree, a student may choose minimum 20 credits provided that the student must ensure the course is approved by the Competent Authority, Government of India.

**BACHELOR OF TECHNOLOGY (MECHANICAL ENGINEERING) CREDIT BASED  
KURUKSHETRA UNIVERSITY KURUKSHETRA  
SCHEME OF STUDIES/EXAMINATION  
SEMESTER III (w.e.f. session 2019-2020 )**

S. No.	Course No.	Course Name	L:T:P	Hours/ Week	Credits	Examination Schedule (Marks)				Duration of Exam (Hrs.)
						Major Test	Minor Test	Practical	Total	
1	BS-201	Optics & Waves	3:0:0	3	3	75	25	0	100	3
2	BS-205	Advanced Engineering Mathematics	3:0:0	3	3	75	25	0	100	3
3	ES-203	Basic Electronics Engineering	3:0:0	3	3	75	25	0	100	3
4	MEC-201	Theory of Machines	3:1:0	4	4	75	25	0	100	3
5	MEC-203	Mechanics of Solids-I	3:1:0	4	4	75	25	0	100	3
6	MEC-205	Thermodynamics	3:1:0	4	4	75	25	0	100	3
7	MEC-207L	Theory of Machines Lab	0:0:2	2	1	0	40	60	100	3
8	MEC-209L	Mechanics of Solids Lab	0:0:2	2	1	0	40	60	100	3
9	*MEC-211	Industrial Training-I	2:0:0	2	-	-	100	-	100	
10	**MC-901	Environmental Sciences	3:0:0	3	-	100	-	0	100	3
<b>Total</b>				<b>30</b>	<b>23</b>	<b>450</b>	<b>230</b>	<b>120</b>	<b>800</b>	

\*MEC-211 is a mandatory non-credit course in which the students will be evaluated for the industrial training undergone after 2<sup>nd</sup> semester and students will be required to get passing marks to qualify.

\*\*MC-901 is a mandatory credit-less course in which the students will be required to get passing marks in the major test.

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SCHEME OF STUDIES/EXAMINATION  
SEMESTER IV(w.e.f. session 2019-2020 )**

S. No.	Course No.	Course Name	L:T:P	Hours/ Week	Credits	Examination Schedule (Marks)				Duration of Exam (Hrs.)
						Major Test	Minor Test	Practical	Total	
1	ES-204	Materials Engineering	3:0:0	3	3	75	25	0	100	3
2	MEC-202	Applied Thermodynamics	3:0:0	3	3	75	25	0	100	3
3	MEC-204	Fluid Mechanics & Fluid Machines	3:1:0	4	4	75	25	0	100	3
4	MEC-206	Mechanics of Solids-II	3:1:0	4	4	75	25	0	100	3
5	MEC-208	Instrumentation & Control	3:0:0	3	3	75	25	0	100	3
6	ES-206L	Materials Engineering Lab	0:0:2	2	1	0	40	60	100	3
7	MEC-210L	Fluid Mechanics & Fluid Machines Lab	0:0:2	2	1	0	40	60	100	3
8	*MC-902	Constitution of India	3:0:0	3	-	100	-	-	100	3
<b>Total</b>				<b>24</b>	<b>19</b>	<b>375</b>	<b>205</b>	<b>120</b>	<b>700</b>	

\*MC-902 is a mandatory credit-less course in which the students will be required to get passing marks in the major test.

**Note: All the students have to undergo 4 to 6 weeks Industrial Training after 4<sup>th</sup> semester which will be evaluated in 5<sup>th</sup> semester.**

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**SCHEME OF STUDIES/EXAMINATION**  
**SEMESTER V(w.e.f. session 2020-2021 )**

S. No.	Course No.	Course Name	L:T:P	Hours/ Week	Credits	Examination Schedule (Marks)				Duration of Exam (Hrs.)
						Major Test	Minor Test	Practical	Total	
1	HM-905	Entrepreneurship	3:0:0	3	3	75	25	0	100	3
2	MEC-301	Heat Transfer	3:1:0	4	4	75	25	0	100	3
3	MEC-303	Production Technology	3:0:0	3	3	75	25	0	100	3
4	MEC-305	Mechanical Vibrations and Tribology	3:0:0	3	3	75	25	0	100	3
5	MEC-307L	Heat Transfer lab	0:0:2	2	1	0	40	60	100	3
6	MEC-309L	Production Technology Lab	0:0:2	2	1	0	40	60	100	3
7	MEC-311L	Mechanical Vibrations and Tribology Lab	0:0:2	2	1	0	40	60	100	3
8	MEC-313L	Project-I	0:0:2	2	1	-	0	100	100	3
9	*MEC-315	Industrial Training-II	2:0:0	2	-	-	100	-	100	-
10	**MC-903	Essence of Indian Traditional Knowledge	3:0:0	3	-	100	-	-	100	3
<b>Total</b>				<b>26</b>	<b>17</b>	<b>300</b>	<b>220</b>	<b>280</b>	<b>800</b>	

\*MEC-315 is a mandatory non-credit course in which the students will be evaluated for the industrial training undergone after 4<sup>th</sup> semester and students will be required to get passing marks to qualify.

\*\*MC-903 is a mandatory credit-less course in which the students will be required to get passing marks in the major test.

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SEMESTER VI(w.e.f. session 2020-2021 )**

S. No.	Course No.	Course Name	L:T:P	Hours/ Week	Credits	Examination Schedule (Marks)				Duration of Exam (Hrs.)
						Major Test	Minor Test	Practical	Total	
1	HM-901	Organizational Behaviour	3:0:0	3	3	75	25	0	100	3
2	MEC-302	Manufacturing Technology	3:0:0	3	3	75	25	0	100	3
3	MEC-304	Design of Machine Elements	2:4:0	6	6	75	25	0	100	4
4	MEC-306L	Mechanical Engineering Lab-I	0:0:2	2	1	0	40	60	100	3
5	MEC-308L	Mechanical Engineering Lab-II	0:0:2	2	1	0	40	60	100	3
6	MEC-310L	Project-II	0:0:6	6	3	0	0	100	100	3
7	MEP*	Program Elective-I	3:1:0	4	4	75	25	0	100	3
8	MEP*	Program Elective -II	3:1:0	4	4	75	25	0	100	3
<b>Total</b>				<b>30</b>	<b>25</b>	<b>375</b>	<b>205</b>	<b>220</b>	<b>800</b>	

Course No.	Program Elective I	Course No.	Program Elective II
MEP-302	Internal Combustion Engines	MEP-308	Composite Materials
MEP-304	Gas Dynamics and Jet Propulsion	MEP-310	Refrigeration and Air Conditioning
MEP-306	Design of Transmission Systems	MEP-312	Product Engineering

**Note:** All the students have to undergo 4 to 6 weeks Industrial Training after 6<sup>th</sup> semester which will be evaluated in 7<sup>th</sup> semester.

\* The course of Program Elective will be offered at 1/3<sup>rd</sup> strength or 20 students (whichever is smaller) of the section.

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SEMESTER VII(w.e.f. session 2021-2022 )**

S. No.	Course No.	Course Name	L:T:P	Hours/ Week	Credits	Examination Schedule (Marks)				Duration of Exam (Hrs.)
						Major Test	Minor Test	Practical	Total	
1	MEO*	Open Elective-I	3:0:0	3	3	75	25	0	100	3
2	MEC-401	Automation in Manufacturing	3:0:0	3	3	75	25	0	100	3
3	MEC-403L	Mechanical Engineering Lab-III	0:0:2	2	1	0	40	60	100	3
4	MEC-405L	Project-III	0:0:10	10	5	0	100	100	200	3
5	MEP*	Program Elective-III	3:0:0	3	3	75	25	0	100	3
6	MEP*	Program Elective -IV	3:0:0	3	3	75	25	0	100	3
7	**MEC-407	Industrial Training-III	2:0:0	2	-	-	100	-	100	
<b>Total</b>				<b>26</b>	<b>18</b>	<b>300</b>	<b>240</b>	<b>160</b>	<b>700</b>	

Program Elective-III		Program Elective-IV		Open Electives-I	
Course No.	Course Name	Course No.	Course Name	Course No.	Course Name
MEP-401	Computer Aided Design	MEP-407	Mechatronic Systems	MEO-401	Smart Materials
MEP-403	Finite Element Analysis	MEP-409	Industrial Robotics	MEO-405	Non-Destructive Testing
MEP-405	Power Plant Engineering	MEP-411	Solar Energy Analysis	MEO-407	Manufacturing Cost Estimation
				MEO-409	Ergonomics
				MEO-411	Air and Noise Pollution

\* The course of both Program Elective and Open Elective will be offered at 1/3<sup>rd</sup> strength or 20 students (whichever is smaller) of the section.

\*\*MEC-407 is a mandatory non-credit course in which the students will be evaluated for the industrial training undergone after 6<sup>th</sup> semester and students will be required to get passing marks to qualify.

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SEMESTER VIII(w.e.f. session 2021-2022 )**

S. No.	Course No.	Course Name	L:T:P	Hours/Week	Credits	Examination Schedule (Marks)				Duration of Exam (Hrs.)
						Major Test	Minor Test	Practical	Total	
1	MEC-402L	Project-IV	0:0:10	10	5	-	100	100	200	3
2	MEO*	Open Elective-II	3:0:0	3	3	75	25	0	100	3
3	MEO*	Open Elective-III	3:0:0	3	3	75	25	0	100	3
4	MEP*	Program Elective-V	3:0:0	3	3	75	25	0	100	3
5	MEP*	Program Elective-VI	3:0:0	3	3	75	25	0	100	3
<b>Total</b>				<b>22</b>	<b>17</b>	<b>300</b>	<b>200</b>	<b>100</b>	<b>600</b>	

Program Elective- V		Program Elective-VI	
Course No.	Course Name	Course No.	Course Name
MEP-402	Non-Conventional Machining	MEP-408	Welding Technology
MEP-404	Automobile Engineering	MEP-410	Design of Pressure Vessels and Piping
MEP-406	Product Design and Manufacturing	MEP-412	Quality and Reliability Engineering

Open Elective- II		Open Elective-III	
Course No.	Course Name	Course No.	Course Name
MEO-402	Supply Chain Management	MEO-408	Lubricants and Lubrication
MEO-404	Competitive Manufacturing Systems	MEO-410	Total Quality Management
MEO-406	Concurrent Engineering	MEO-412	Energy Conservation and Management