

जा.क्र.शा.अमेक/ 763
 यंत्र अभियांत्रिक विभाग
 शासकिय अभियांत्रिकी महाविद्यालय, कराड
 दिनांक- 18-8-2021

Government College of Engineering, Karad

(an Autonomous Institute of Government of Maharashtra)

Scheme of Instructions and Syllabus

Scheme of Instructions for First Year M. Tech. course in Heat Power Engineering

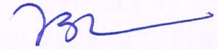
Semester – I (w.e.f.: AY 2019-20)

Sr.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs / week	Credits	Exam Scheme				
									CT - 1	CT - 2	TA / CA	ESE	TOTAL
1.	PCC	HP1101	Thermodynamics and Combustion	3	-	-	3	3	15	15	10	60	100
2.	PCC	HP1102	Advanced Heat Transfer	3	-	-	3	3	15	15	10	60	100
3.	PEC	HP11*3	Program Elective - I	3	-	-	3	3	15	15	10	60	100
4.	PEC	HP11*4	Program Elective - II	3	-	-	3	3	15	15	10	60	100
5.	MDC	RM1105	Research Methodology	2	-	-	2	2	15	15	10	60	100
6.	PCC	HP1106	Lab Practice - I	-	-	4	4	2	-	-	25	25	50
7.	PEC	HP1107	Lab Practice - II	-	-	4	4	2	-	-	25	25	50
8.	OEC	OE11*8	Open Elective	3	-	-	3	3	15	15	10	60	100
9.	MNC	AU11*9	Audit Course - I	2	-	-	2	-	-	-	-	-	-
Total				19	-	8	27	21	90	90	110	410	700

L- Lecture T-Tutorial P-Practical CT1- Class Test 1 CT2- Class Test 2 TA/CA- Teacher Assessment / Continuous Assessment

ESE- End Semester Examination (For Laboratory: End Semester Performance)

*- Program Elective / Audit Course / Open Elective (list is provided at the end of structure)


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Semester – II (w.e.f.: AY 2019-20)

Sr.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs / week	Credits	Exam Scheme				
									CT - 1	CT - 2	TA / CA	ESE	TOTAL
1.	PCC	HP1201	Advanced Fluid Dynamics	3	-	-	3	3	15	15	10	60	100
2.	PCC	HP1202	Steam Engineering	3	-	-	3	3	15	15	10	60	100
3.	PEC	HP12*3	Program Elective - III	3	-	-	3	3	15	15	10	60	100
4.	PEC	HP12*4	Program Elective – IV	3	-	-	3	3	15	15	10	60	100
5.	PEC	HP12*5	Program Elective - V	3	-	-	3	3	15	15	10	60	100
6.	PCC	HP1206	Lab Practice - III	-	-	4	4	2	-	-	25	25	50
7.	PEC	HE1207	Lab Practice - IV	-	-	4	4	2	-	-	25	25	50
8.	P / S / IT	HP1208	Seminar on Pre-Dissertation work	-	-	4	4	2	-	-	50	50	100
9.	MNC	AU12*9	Audit Course – II	2	-	-	2	-	-	-	-	-	-
			Total	17	-	12	29	21	90	90	110	410	700

L- Lecture T-Tutorial P-Practical CT1- Class Test 1 CT2- Class Test 2 TA/CA- Teacher Assessment / Continuous Assessment
ESE- End Semester Examination (For Laboratory: End Semester Performance)

*- Program Elective / Audit Course / Open Elective (*list is provided at the end of structure*)

*-Program Elective V - Students are permitted to register online courses available on different online platforms. If student will choose classroom teaching process, then only CT-I, CT-II, ESE will be conducted, otherwise grade will be accepted as given by course offering agency.

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Semester – III (w.e.f.: AY 2019-20)

Sr.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs / week	Credits	Exam Scheme				
									CT - 1	CT - 2	TA / CA	ESE	TOTAL
1.	P / S / IT	HP1301	Dissertation - I	-	-	14	14	07	-	-	100	100	200
2.	PEC	HP1302 **	MOOC online course (8-12 weeks)	-	-	-	-	03	-	-	-	-	-
Total				-	-	14	14	10	-	-	100	100	200

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** HP1302 is mandatory and will be decided by respective Guide in consultation with Programme Head.


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Semester – IV (w.e.f.: AY 2019-20)

Sr.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs / week	Credits	Exam Scheme				
									CT - 1	CT - 2	TA / CA	ESE	TOTAL
1.	P / S / IT	HP1401	Dissertation - II	-	-	32	32	16	-	-	100*	200	300
			Total	-	-	32	32	16	-	-	100	200	300

TA/CA- Teacher Assessment / Continuous Assessment

ESE- End Semester Examination (For Laboratory: End Semester Performance)

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List of Program Elective Courses

Semester – I		Semester – II		
Program Elective - I	Program Elective - II	Program Elective - III	Program Elective - IV	Program Elective - V
HP1113: Nuclear Engineering	HP1114: Air Conditioning System Design	HE1213: Refrigeration and cryogenics	HP1214: Computational Fluid Dynamics	HP1215: Engineering Experimental Techniques
HP1123: Energy Conservation and Management.	HP1124: Gas Turbines	HP1223: Advanced I. C. Engine	HP1224: Design of Solar and Wind System	HP1225: Design of Heat Exchangers
HP1133: Design of Fluid Power Systems	HP1134: Advanced Automobile Engineering	HP1233: Advanced Mathematical Methods in Engineering	HP1234: Energy Analysis of Thermal Systems	HP1235: Design of Pump, Compressor and turbine
				HP 1245: online/ MOOC Course


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List of Open Electives and Audit Courses

Semester - I		Semester - II
Open Electives	Audit Course - I	Audit Course - II
OE1118: Business Analytics	AU1119: Research Paper Writing	AU1219: Constitution of India
OE1128: Industrial Safety	AU1129: Disaster Management	AU1229: Pedagogy Studies
OE1138: Operations Research	AU1139: Sanskrit for Technical Knowledge	AU1239: Stress Management by Yoga
OE1148: Cost Management of Engineering Projects	AU1149: Value Education	AU1249: Personality Development through Life Enlightenment Skills
OE1158: Composite Materials		
OE1168: Waste to Energy		

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