

**Rajiv Gandhi University of Knowledge Technologies
Andhra Pradesh**



Master of Technology
in
Engineering Analysis and Design
Course Structure
&
Syllabus
Academic Year 2021-22
(for 2021-22 Admitted Batch onwards)

Master of Technology in Engineering Analysis and Design

Course Structure

I Year I Semester

S. No	Course Code	Course Category	Course Title	L	T	P	Credits
1	21EAD1101	PCC	Advanced Stress Analysis	2	1	0	3
2	21EAD1102	PCC	Finite Element Analysis	3	0	0	3
3	21EAD1103	PCC	Mechanical Behavior of Materials	3	0	0	3
4	21EAD1104	PCC	Mechanical Vibrations	3	0	0	3
5	21EAD11XX	PEC	Program Elective – I	3	0	0	3
8	21EAD1171	MC	Research Methodologies & IPR	2	0	0	2
9	21EAD1181	PCC	Advanced Analysis and Simulation Laboratory	0	0	3	1.5
10	21EAD11XX	MC	Audit Course-I	2	0	0	0
Total				16	3	3	18.5

I Year II Semester

S. No	Course Code	Course Category	Course Title	L	T	P	Credits
1	21EAD1205	PCC	Engineering Failure Analysis	3	0	0	3
2	21EAD1206	PCC	Product Design and Development	3	0	0	3
3	21EAD12XX	PEC	Program Elective –II	3	0	0	3
4	21EAD12XX	PEC	Program Elective – III	3	0	0	3
5	21EAD12XX	OEC	Open Elective	3	0	0	3
6	21EAD1282	PCC	Mechanical Behavior of Materials Laboratory	0	0	3	1.5
7	21EAD1272	MC	Technical Seminar	0	0	2	1
8	21EAD12XX	MC	Audit Course – II	2	0	0	0
Total				17	0	6	17.5

II Year I Semester

S. No	Course Code	Course Category	Course Title	L	T	P	Credits
1	21EAD2191	PROJ	Project (Phase –I)	0	0	32	16
Total				0	0	32	16

II Year II Semester

S. No	Course Code	Course Category	Course Title	L	T	P	Credits
1	21EAD2192	PROJ	Project (Phase –II)	0	0	32	16
Total				0	0	32	16

List of Professional Elective Courses

Course Category	Course Code	Course Title	L-T-P	Credits
Product Design Stream				
PEC	21EADXX11	Computer Applications in Design	3-0-0	3
PEC	21EADXX12	Design Optimization and Decision Theory	3-0-0	3
PEC	21EADXX13	Product Reliability	3-0-0	3
PEC	21EADXX14	Design and Analysis of Thermal Systems	3-0-0	3
PEC	21EADXX15	Mechatronics Product Design	3-0-0	3
PEC	21EADXX16	Design of Robotic System	3-0-0	3
PEC	21EADXX17	Design of Automobile Systems	3-0-0	3
Engineering Mechanics Stream				
PEC	21EADXX21	Experimental Mechanics	2-1-0	3
PEC	21EADXX22	Dynamics and Mechanisms Design	2-1-0	3
PEC	21EADXX23	Theory of Plates and Shells	2-1-0	3
PEC	21EADXX24	Mechanics of Composite Materials	2-1-0	3
Materials and Manufacturing				
PEC	21EADXX31	Modern Engineering Materials	3-0-0	3
PEC	21EADXX32	Microstructural Characterization of Materials	3-0-0	3
PEC	21EADXX33	Advanced material technology	3-0-0	3
PEC	21EADXX34	Computational methods in manufacturing processes	3-0-0	3
PEC	21EADXX35	Material testing and characterization	3-0-0	3
PEC	21EADXX36	Additive Manufacturing	3-0-0	3
PEC	21EADXX37	Analysis and modelling of welding	3-0-0	3
PEC	21EADXX38	Materials Joining Technology	3-0-0	3
PEC	21EADXX39	Design for Manufacturing	3-0-0	3

Energy and Fluid Systems				
PEC	21EADXX41	Advanced Fluid Mechanics	3-0-0	3
PEC	21EADXX42	Advanced Heat and Mass Transfer	3-0-0	3
PEC	21EADXX43	Computational Fluid Dynamics	3-0-0	3
PEC	21EADXX44	Non-conventional Energy Sources	3-0-0	3

Open Elective Courses

Course Category	Course Code	Course Title	L-T-P	Credits
OEC	21EADXX65	Business Analytics	3-0-0	3
OEC	21EADXX66	Industrial Safety	3-0-0	3
OEC	21EADXX67	Operations Research	3-0-0	3
OEC	21EADXX68	Aptitude and Reasoning	2-1-0	3
OEC	21EADXX69	Cost Management of Engineering Projects	3-0-0	3

Audit Courses

Course Category	Course Code	Course Title	L-T-P	Credits
MC	21EADXX73	Python Programming	2-0-2	3
MC	21EADXX74	Machine Learning and Artificial Intelligence	2-0-2	3
MC	21EADXX75	English for Research Paper Writing	3-0-0	3
MC	21EADXX76	Disaster Management	3-0-0	3
MC	21EADXX77	Personality Development through Life Enhancement Skills	3-0-0	3
MC	21EADXX78	Constitution of India	3-0-0	3
MC	21EADXX79	Pedagogy Studies	3-0-0	3