



KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE, WARANGAL  
**MINOR IN PHYSICS (MPY) - MINOR CURRICULUM**  
 EQUIVALENT MOOCs - ODD SEMESTER, JULY-DEC 2020, AY 2020-21

S.No	Course Code	Course Name	EQUIVALENT COURSES OFFERED BY								
			SWAYAM-NPTEL			COURSERA / UDEMY			SPOKEN TUTORIAL - IITB		
MINOR COMPULSORY COURSES			Course Name	C	Course Dates*	Course Name	C	Course Dates*	Course Name	C	Course Dates*
1	U18MPY1001	Vibrations and Waves	Waves and Oscillations	3	CCD: 20.07.2020	--	-	-	--	-	--
					LDR: 27.07.2020			-			-
2	U18MPY1002	Optoelectronics	Semiconductor Optoelectronics	3	CCD: 20.07.2020	--	-	-	--	-	-
					LDR: 27.07.2020			-			-
3	U18MPY1003	Optical fiber communication	Fiber optic Communication technology	3	CCD: 20.07.2020	--	-	-	--	-	-
					LDR: 27.07.2020			-			-
MINOR ELECTIVE COURSES											
4	U18MPY1004	Principles of Lasers and their applications	Laser: Fundamentals and Applications	2	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			-
5	U18MPY1005	Nanomaterials	Fundamentals of micro and nanofabrication	3	CCD: 20.07.2020	--	-	--	--	--	--
					LDR: 27.07.2020			-			-

6	U18MPY1006	Applications of Physics: A modern perspective	Solar Energy Engineering and Technology	3	CCD: 20.07.2020	--	-	--	--	-	--
					LDR: 27.07.2020						
7	U18MPY1007	Fundamentals of Electromagnetism	Applied Electromagnetics for Engineers	3	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			-
8	U18MPY1008	Classical Physics	Introduction to Classical Mechanics	3	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			--
9	U18MPY1009	Solid state physics	Solid state physics	3	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			-
10	U18MPY1010	Introduction to Nuclear and Particle Physics	Nuclear and Particle Physics	3	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			-
11	U18MPY1011	Modern materials	Physics of materials	3	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			-
12	U18MPY1012	Experimental Physics	Experimental Physics	3	CCD: 20.07.2020	--	-	--	--	-	--
					LDR: 27.07.2020			-			-
13	U18MPY1013	Computational physics	Computational physics	3	CCD: 20.07.2020	--	-	-	-	-	-
					LDR: 27.07.2020			-			-

14	U18MPY1014	Quantum Physics	Quantum mechanics and molecular spectroscopy	2	CCD: 14.09.2020	--	--	-	--	-	--
					LDR: 21.09.2020			-			--
15	U18MPY1015	Smart materials	Materials Science, IGNOU	3	CCD: 15.07.2020	--	-	--	--	-	--
					LDR: 24.07.2020			--			--
16	U18MPY1016	Thermodynamics	Thermodynamics & its applications, IGNOU	3	CCD: 15.07.2020	--	-	--	--	-	--
					LDR: 24.07.2020			--			--
17	U18MPY1017	Mechanics	--	-	--	Mechanics: Kinematics and Dynamics, Massachusetts Institute of Technology(MITx)	3	CCD: 17.07.2020	--	-	--
								LDR: 24.07.2020			--
18	U18MPY1018	Oscillations	--	--	--	Mechanics: Simple Harmonic Motion (edX), Massachusetts Institute of Technology (MITx)	2	CCD: 17.07.2020	--	-	--
								LDR: 24.07.2020			--

- I. In exigency situations such as the student already completed the listed compulsory courses(s) on his/her own interest during previous semesters through valid MOOCs etc, the HoD in consultation with Dean-AA shall propose an alternative course(s) for the specific scenario, after verification of relevant documents.
- II. By the end of April of every academic year, the department in consultation with Dean-AA, shall
- notify the list of equivalent courses in SWAYAM-NPTEL MOOCs / other standard MOOCs against the list of courses notified under Honours curriculum
  - propose a new course(s) in the place of any listed course(s) in the Honours curriculum, in case no equivalent course is found in MOOCs

\*C: Credits ; CCD: Course Commencement Date; LDR: Last Date of Registration

-	<b>Minor Laboratory Courses</b>	<b>Laboratory Courses ( any 2 courses ) - TO BE TAKEN IN THE MINOR DEPARTMENT</b>		
19		<b>U18MPY1019</b>	<b>Applied Optics Laboratory</b>	<b>2 credits</b>
20		<b>U18MPY1020</b>	<b>Oscillations and waves laboratory</b>	
21		<b>U18MPY1021</b>	<b>Electricity &amp; Magnetism laboratory</b>	
22		<b>U18MPY1022</b>	<b>Modern Physics Laboratory</b>	
			<i>Total Credits to be earned</i>	<b>18+2</b>

Date: 17.07.2020

*Sd/-*  
Dr. K. Rajendra Prasad  
MOOCs Coordinator

*Sd/-*  
Dr. T. Madhukar Reddy  
Head of the Department

Dean, Academic Affairs