KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE
(An Autonomous Institute under Kakatiya University, Warangal)
(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)
Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, Telangana, INDIA.
काकतीय प्रैद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६ ०१५
కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫
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DEPARTMENT OF PHYSICAL SCIENCES

MINOR IN PHYSICS (MPY)

1. **Minor in Engineering:** A minor in engineering is an additional credential a student may earn, if he/she does additional learning for 20 credits *in a discipline other than his/her major discipline* of B.Tech programme. These additional credits shall be acquired through MOOCs from the *list of courses for a Minor Engineering* prescribed by the respective departments. On successful accumulation of these additional credits, at the time of graduation, it shall be mentioned in the degree certificate as "*Bachelor of Technology in XXX Engineering/Technology, with Minor in YYY Engineering/Technology*"

2. A Minor in Engineering allows students to officially explore interested engineering programme other than their own and thus an opportunity to expand their breadth of study in engineering disciplines

3. This facility for additional learning leading to Minor in Engineering is applicable for the batches admitted from AY 2018-19

4. A **Minor in Physics** is advantageous to those who wish to augment their major engineering discipline with **Physics** courses. It can add value to their academic background for higher studies, allows them to take up interdisciplinary research and throws good opportunities in industry

5. The students of other departments opting to pursue a **Minor Degree in Physics**, have to earn 20 credits by choosing six (6) to nine (9) theory courses and two (2) laboratory courses prescribed in the Minor Curriculum

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MINOR CURRICULUM

S.No	Course Type	Course Code	Course Name	Credits
1	Minor Compulsory Courses	U18MPY1001	Vibrations and Waves	18
2		U18MPY1002	Optoelectronics	
3		U18MPY1003	Optical fiber communication	
	Minor Elective Courses	*Elective courses (any 3 to 6 courses)*		
4		U18MPY1004	Principles of Lasers and their applications	
5		U18MPY1005	Nanomaterials	
6		U18MPY1006	Applications of Physics: A modern perspective	
7		U18MPY1007	Fundamentals of Electromagnetism	
8		U18MPY1008	Classical Physics	
9		U18MPY1009	Solid state physics	
10		U18MPY1010	Introduction to Nuclear and Particle Physics	
11		U18MPY1011	Modern materials	
12		U18MPY1012	Experimental Physics	
13		U18MPY1013	Computational physics	
14		U18MPY1014	Quantum physics	
15		U18MPY1015	Smart materials	
16		U18MPY1016	Thermodynamics	
17		U18MPY1017	Mechanics	
18		U18MPY1018	oscillations	

I. In exigency situations such as the student already completed the listed compulsory courses(s) or elective course(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

1. notify the list of equivalent courses in SWAYAM-NPTEL MOOCs / other standard MOOCs against the courses listed under Minor curriculum
2. propose a new course(s) in the place of any course(s) listed under Minor curriculum, in case no equivalent course is found in MOOCs

-	Minor Laboratory Courses	*Laboratory Courses (any 2 courses)*		
19		U18MPY1019	Applied Optics Laboratory	2
20		U18MPY1020	Oscillations and waves laboratory	
21		U18MPY1021	Electricity & Magnetism laboratory	
22		U18MPY1022	Modern Physics Laboratory	
			Total Credits	*20*