



# 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.

కాకతీయ ప్రేక్షాగికి అం విజ్ఞాన సంస్థాన, వరంగల్ - ౫౦౬ ౦౧౫

కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫

website: [www.kitsw.ac.in](http://www.kitsw.ac.in)

E-mail: [principal@kitsw.ac.in](mailto:principal@kitsw.ac.in)

☎ : +91 9392055211, +91 7382564888

## DEPARTMENT OF PHYSICAL SCIENCES

### MINOR IN CHEMISTRY (MCH)

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 Chemistry** is advantageous to those who wish to augment their major engineering discipline with **chemistry** 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 chemistry**, have to earn 20 credits by choosing six (6) to nine (9) theory courses and two (2) laboratory courses prescribed in the Minor Curriculum

**MINOR IN CHEMISTRY (MCH)  
MINOR CURRICULUM**

S.No	Course Type	Course Code	Course Name	Credits
1	<b>Minor Compulsory Courses</b>	U18MCH1001	<b>Fundamentals of Organic Chemistry</b>	<b>18</b>
2		U18MCH1002	<b>Co-ordination Chemistry</b>	
3		U18MCH1003	<b>Analytical Chemistry</b>	
	<b>Minor Elective Courses</b>	<b>Elective courses ( any 3 to 6 courses )</b>		
4		U18MCH1004	<b>Basics of organic reaction mechanism</b>	
5		U18MCH1005	<b>Quantum Chemistry</b>	
6		U18MCH1006	<b>Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy</b>	
7		U18MCH1007	<b>Stereochemistry</b>	
8		U18MCH1008	<b>Chemical Thermodynamics and Kinetics</b>	
9		U18MCH1009	<b>Spectroscopic Techniques for Pharmaceutical and Biopharmaceutical Industries</b>	
10		U18MCH1010	<b>Food Chemistry</b>	
11		U18MCH1011	<b>Biochemistry</b>	
12		U18MCH1012	<b>Quantum Mechanics and Molecular Spectroscopy</b>	
13		U18MCH1013	<b>Spectroscopy and its Applications</b>	
14		U18MCH1014	<b>Chemical Crystallography</b>	
15		U18MCH1015	<b>Introduction to Polymer Science</b>	
16		U18MCH1016	<b>Polymers: concepts, properties, uses and sustainability</b>	
17		U18MCH1017	<b>Environmental Chemistry</b>	
18	U18MCH1018	<b>Environmental Soil Chemistry</b>		
<p>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.</p> <p>II. By the end of April of every academic year, the department in consultation with Dean-AA, shall</p> <ol style="list-style-type: none"> <li>1. notify the list of equivalent courses in SWAYAM-NPTEL MOOCs / other standard MOOCs against the courses listed under Minor curriculum</li> <li>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</li> </ol>				
-	<b>Minor Laboratory Courses</b>	<b>Laboratory Courses ( any 2 courses )</b>		
19		U18MCH1019	<b>Computational Chemistry Laboratory</b>	<b>2</b>
20		U18MCH1020	<b>Polymer Synthesis Laboratory</b>	
21		U18MCH1021	<b>Water Quality Analysis Laboratory</b>	
22		U18MCH1022	<b>Metal Nanoparticles Synthesis Laboratory</b>	
<b>Total Credits</b>				<b>20</b>