

M.Tech in Cyber Physical Systems In Collaboration with CSIR-CEERI, Pilani



Central University of Rajasthan



Course Offered

M. Tech (Cyber Physical Systems)

Duration

2 years

Eligibility Criteria

**M. Sc. with Physics/Electronics/
Computer Science/Information
Technology/ or Mathematics**

OR

**B.E./B. Tech. in Computer Sci-
ence/Information technology or
related stream**

OR

**MCA (Master of Computer Appli-
cations)**

**50% marks in graduation for
general category and minimum
45% marks for reserved catego-
ries**

Central University of Rajasthan

The Central University of Rajasthan (CURaj) was established by an Act of Parliament as a Central University. Uniquely, all the programs are so designed to develop CURaj as a Centre for generation of knowledge, enhancement of employability and most importantly as a breeding ground of ideas and techniques for sustainable development. The University is ranked 34 in National Institutional Ranking Framework (NIRF) in the year 2016, the best among the universities established since 2009. As per the recent NAAC accreditation in 2016, the University is rated as 'A' category Universities in the country. The University has recruited faculty from 20 states of the country, many being from reputed institutions with postdoctoral experience from abroad. The University operates from its permanent campus of 520 (approx.) acres and it has adequate infrastructure housing nearly 2000 students in the Campus. It has state-of-art equipment and well-stocked library subscribing all digital resources.

Cyber Physical Systems Programme

A Cyber Physical System (CPS) is an engineered system that are built from the seamless integration of computational algorithms and physical components. It is a system controlled or monitored by computer-based algorithms, tightly integrated with internet and its users. Its operations are monitored, coordinated, controlled and integrated by a computing and communication core.

Cyber Physical Systems (CPS) are mainly built with embedded sensors, processors and actuators that are designed to sense and interact with the physical world, and support real-time, guaranteed performance in safety-critical applications. CPS connects strongly to the currently popular terms Internet of Things (IoT), the industrial Internet, Machine-to-Machine (M2M), the Internet of Everything, TSensors (Trillion Sensors), and The Fog (like The Cloud, but closer to the ground). All of these reflect a vision of a technology that deeply connects the physical world with the information world.

M.Tech in Cyber Physical Systems

M. Tech in Cyber Physical Systems) is offered as 4-semester PG programme in the Department of Computer Science, School of Mathematics, Statistics & Computer Science in collaboration with CSIR-CEERI, Pilani. The course is specially designed jointly by CURaj and CSIR-CEERI, Pilani to prepare the students to have a firm foundation on latest technologies as well as to be ready for the industry. In the last 2 semesters, the eligible students can do dissertation work at CSIR-CEERI, Pilani.

Admission Process

Admission to this course is through the Central Universities Common Entrance Test (CUCET-2018) (<https://cucetexam.in/>). The candidates are required to keep checking the admission notification of CUCET -2018. The entrance test will be of multiple choice type with 100 questions and 2 hours duration. A candidate can apply to this course in addition to other M. Tech. Courses of other Central Universities provided that the examination schedule is not clashing. The syllabus for the test will be notified in CUCET website. The admission is purely based on merit of the CUCET examination. The University follows the reservation policy specified by Govt. of India. There is no other means of entry to this course. Admission processes includes entrance examination through CUCET-2018 (75%) and interview (25%) .

Academics

This Post Graduate program spans for 4 semesters, of which, 2 semesters will be focused on course work on latest technologies such as Cloud Computing, WSNs, and IoT etc. and their applications. The last 2 semesters will be the dissertation work.

Academic Partnership

As per the MoU signed between Central University of Rajasthan and CSIR-CEERI, Pilani, following areas of collaboration between the two institutes have been agreed (1) Students Exchange in the second year (third and/or fourth semesters) (2) Collaboration on Curriculum Development and Teaching; (3) Faculty Exchange; (4) Collaboration for Industry interactions for seeking internships/placement opportunities for students.

Career Prospects

Curriculum design is industry relevant enabling ample placement opportunities. On successfully completion, the candidate will be ready to embark on a flourishing career in leading organizations. Candidates can also pursue higher education in any of the reputed organizations.

| Semester-I | Semester-II | Semester-III | Semester-IV |
|--------------------------------------|----------------------|----------------------------|-----------------|
| Probability Theory and Distributions | WSN and IoT | Computing for Data Science | Dissertation-II |
| Algorithm and Complexity | System Programming | Dissertation-I | |
| Advanced Computer Networks | Program Elective-II | | |
| Programming Elective -I | Program Elective-III | | |
| Open Elective-I | Minor Project | | |
| System Design Lab | Open Elective-II | | |

Advisors



Prof. Arun K. Pujari
(Vice-Chancellor, CURAJ)



Prof. Santanu Chaudhury
(Director, CSIR-CEERI), Pila-
ni)



Dr. S.C. Bose Chief Scientist,
(Area Coordinator, Group
Head, CPS, CSIR-CEERI, Pila-
ni)



Prof. Sudip Misra
(Dept. of CSE, IIT Kharagpur)



Prof. Siba K. Udgata
(School of Computer and
Information Sciences, Univer-
sity of Hyderabad)

Faculty



Mr. Ravi Saharan
(Asst. Professor, Dept. of CSE)



Dr. Muzzammil Hussain
(Asst. Professor, Dept. of CSE)



Mr. Gaurav Somani
(Asst. Professor, Dept. of CSE)



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(Asst. Professor, Dept. of CSE)



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(Assoc. Professor, Dept. of CS)



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