



APPLIED ROBOTIC CONTROL LAB (ARC)

About ARC:

APS European Centre for Mechatronics (ECM) based in Aachen, Germany was founded in 1981. They have been working in the fields of robotics, sensor technology, information and communication technology for more than 30 years. Engineers and technicians from various disciplines develop and implement interdisciplinary concepts and solutions in cooperation with national and international industrial partners, public procurers and researchers. A particular concern of theirs is the support for small and medium-sized enterprises in the introduction and use of innovative technologies. For the first time European Centre for Mechatronics is expanding its wings outside Germany, though this program to develop ecosystem for industries to effectively adapt and implement new technologies. Through “Indo-European Skilling Centers for Mechatronics and Industrial Robotics”, ECM intends to create such ecosystem in AP by training students to attain High-end technical skills to cater to the needs of global industry.

The APSSDC to achieve their mission of shaping AP as the skilled-workforce and knowledge hub for the world, is spearheading various skill development programs across the state. This unique program is in partnership with European Centre for Mechatronics, APSSDC and partner colleges/universities is set to enhance advanced engineering skills of 20,000+ students (over a period of 5 years) to the highest global standards in the fields of industrial robotics and manufacturing automation.

As a value addition to the program, ECM will also put efforts in connecting industry with academia through initiatives like industry visits, workshops by companies etc. Also Job Mela's will be conducted to benefit the students of ARC Labs to kick-start their careers.

Objectives

- **Brining latest technologies** in automation and manufacturing sectors to the **labs of colleges**.
- Firsthand **experience on industrial robots** for the students
- **Learning with industry –driven production Requirements**.
- **Real-time training** to supplement students with skill on advanced technologies to make them stand out in global arena.
- **Creation of knowledge pool** of students with high-end technical skills for **immediate absorption into research and Industry**.

Details of Courses

	ARC 1.0	ARC 2.0	ARC 3.0
Eligibility	6 th Semester	7 th Semester	8 th Semester
	Mechanical/ECE/EEE/Automobile/Instrumentation Engineering		
No. of EEE Students Trained	10	07	06
Activity	12 weeks course/ crash course	12 weeks Training + Bachelor project (Basic)	6 weeks course with job assistance + Bachelor project
Course contents	Topics of Mechatronics, Manufacturing, Industrial Automation and Robotics	VR in Automation and Robotics. Bachelor project on Industry scale application	Hands on experience on Industry scale robots in an industrial setup
Location	ARC Labs	ARC labs	ECMM, India
Hours	120	120	6 - 8 weeks
	(50% - Teaching/Labs 50% Self learning and Implementation work)		

Students Training Process:

- Students for the program shall be **selected** based on their **academic record and performance in the ARC eligibility test**.
- Selected students will be **provided with the materials** to get well versed with the **prerequisites** like C language programming.
- Apart from theoretical classes, **emphasis will be on assignments** involving designing **tasks/jobs for the robots stationed in ARC Labs** of their colleges and also at APS ECM.
- Under experts supervision, students will be able to **remotely access and work on the industrial scale robots** at the labs of APS ECM, Germany during ARC 2.0.
- The **aim is to replicate environment of an industry** using **advanced robotics**, for the students to work on. Helping them evolve from having theoretical knowledge towards practical approach to a problem.

Placement:

8 students (2 EEE, 1 ECE and 5 ME) got placed in Vespa, ISUZU Motors India and Hero motoCorp conducted on 9th January 2020.

Higher Education:

Details regarding courses, fee structure and approach to German Universities, were discussed with students through webinars and informed to provide recommendations to admit in German Universities.



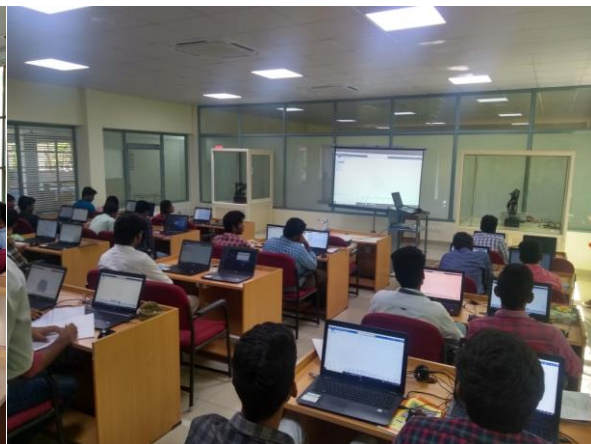
Faculty Training At AACHEN, GERMANY



Faculty Training At VIT, Amaravati



Students Attending ARC1.0 Online Sessions



Students Attending ARC2.0 Practical Sessions



Students Attending ARC2.0 Practical Sessions



Students Training on Industry robot during