KUMARAGURU
college of technology
character is life

October 2017 to
January 2018

NEWS LETTER

Mechatronics Engineering

INSIDE

- *Events*
- *Students details*
- *Students Achievements*
- *Internship Details*
- *Placement Details*
- *Academic Innovation*
- *Staff Activities*
- *Department PE & PEO*

MECHATRONICS

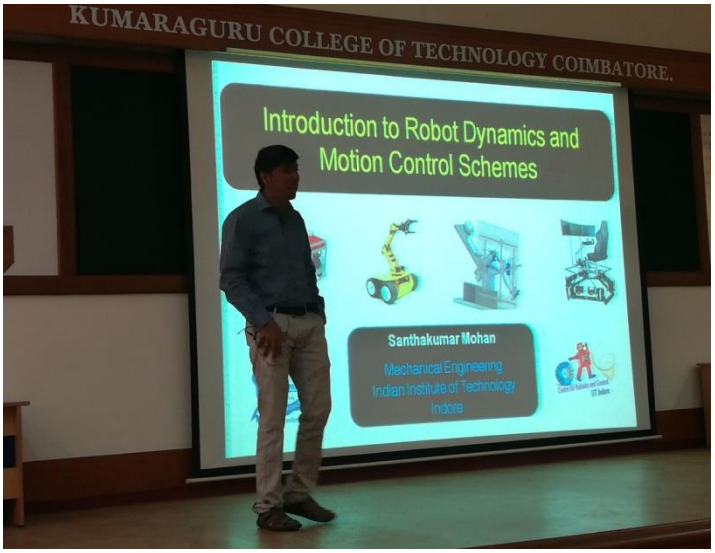
Is a branch of engineering that focuses on designing, manufacturing and maintaining products that have both mechanical and electronic components

EVENTS - Robotics and Automation Club

Robotics and Automation Club is a new club established to help students keep up with the growing pace of the technological industry especially in the field of Robotics and Automation. The club is led by Mr. Arjunraj G.A and Mr. Kunkuma Mithun Balaji V from third year Mechatronics Engineering along with their faculty Co-ordinator Mrs. Akila K, Associate Professor, Mechatronics Department.

The club envisages to:

- To provide a platform for engineers to be innovative and creative in developing their own automated systems.
- To provide a platform to showcase their automated systems.
- To establish Robotics and Automation Society of Coimbatore.



On 25th of January 2018, Robotics and Automation Club inauguration took place in our MCE Department. The inauguration was graced by Dr.Santhakumar/Assistant Professor from IIT Indore. He gave students a lot of clarity, emphasised on strong basic foundations and how to build upon it to be a successful engineer. The students were inspired by his words and we as a club hope to carry forward the momentum and the impact he has created.

This is just the beginning for the club. Lots of activities have been planned. We hope to be a dynamic club in KCT, where we inspire people to join us and be innovators. We hope to change the Engineering culture of the students for the better and provide another perspective to engineering.

STUDENTS DETAILS

INTERNSHIP DETAILS 2014 BATCH EVEN SEMESTER

14BMC025	**MOHAN D**	**SP Automation and Packaging Machine, Ganapathy, CBE – 006**
14BMC026	MOHANKUMAR K	
14BMC042	RAM KUMAR D	Mobiveil inc Technologies India pvt. Ltd., Chennai -32
14BMC047	RUPESH M	Whirldata company
14BMC204	VAITHEESWARAN K	CAE Flow Explore, Avinashi Road, Coimbatore- 18
14BMC050	SARANKUMAR M	SP Automation and Packaging Machine,
14BMC058	VIGNESH B	
14BMC017	KARTHIKEYAN K	Hirotech India Pvt. Ltd.
14BMC055	SUBRAMANIAN V	First Manufacturing Company, Madurai,
14BMC033	POOVARASAN D	ROBERT BOSCH
14BMC202	MOHAN RAJ S	SP Automation and Packaging Machine,
14BMC016	KARTHIKEYAN S	
14BMC201	KRISHNAKUMAR S	Titan Engineering & Automation limited
14BMC023	MADHAN M S	
14BMC206	SIVESHA B M S	
14BMC053	SHAMEER KAMAL S	
14BMC046	ROCHE PERIYANAYAGAM C	Zoho Corporation
14BMC020	KRISHNA KUMAR S (06.03.1997)	Synetics Automation Pvt.Lted.
14BMC012	GOPALAKRISHNAN A	Synetics Automation Pvt.Lted.
14BMC002	ABINAVSANKAR S M	Arun Rega Bakery Machineries Pvt. Ltd.
14BMC030	NIKSON INFANT DHAS N	
14BMC031	NISHANTH P	
14BMC032	PAVITHRA J	
14BMC035	PRADEEP R	
14BMC052	SENGOTTUVELAVAN M	Excell Mechatronics India (p) Ltd.,
14BMC205	ARUN S	
14BMC209	MUTHUPANDI A	

PLACEMENT DETAILS

Student Name	Placement Details
Gopalakrishnan A (14BMC012)	Synetics Automation
Krishna Kumar S (14BMC020)	Synetics Automation
Vignesh B (14BMC058)	The Object Win Technologies
Sengottuvelavan M (14BMC052)	Excel Mechatronics
Arun S (14BMC205)	Excel Mechatronics

STUDENTS ACHIEVEMENT

CII YOUNG ENTREPRENEURSHIP CII

III Year Student Manoj Guha K (15BMC049) won Young Entrepreneurship CII award at Bengaluru on 20.01.2018.

e-Bike

Highlights of the E-bike project:

- An electric bike combines the advantages of a normal bicycle and motorbike.
- It is an ecological means of transport with low management costs allowing free and easy movement.
- The design of the bike is done using the Solid Works software and ANSYS software for analyzing the strength.
- The power used to drive the front wheel of the bike is 350 W and battery rating is Si-gel 36 V, 9 Amps.
- The total cost of the vehicle is Rs.25000/- and the duration of the project is 2 months.

STUDENTS OF THE MONTH – MR.SIVASELVAN – II

RDC IGC

- The INTER GROUP COMPETITION held at Bannari Institute of Technology, Sathyamangalam from 21.10.2017 to 30.10.2017.
- Our Coimbatore group got the Tamilnadu overall trophy of RDC IGC 2017.
- He represented as the parade commander of Coimbatore group.
- He got the Tamilnadu overall trophy from DDG CommodreVigeshkumargarh.VSM

RDC

- Once again he represented the Tamilnadu, Pondicherry, and Andaman & Nicobar directorate in DG NCC Republic Day Camp held at republic day camp at New Delhi from 31.12.2017 to 31.1.2018.
- My participation in this camp is Prime Minister's rally.
- We were the runner's up directorate in all over INDIA.
- He met all the greater dignitaries of our country in the camp.
- He had dinner with the **Air Chief Marshal** B.S.Dhanoa and tea party with the Defence Minister Ms.Nirmalasitharaman.

OFFICER TRAINNING ACADEMY

- The SSB screening course 29 is held at NCC OFFICERS TRAINNING ACADEMY, kamptee from 13.11.2017 to 22.11.2017.
- In this camp I got the knowledge about the SSB and how to train our self to the SSB and also live officer life for these camp days.
- He secured fifth place in the marathon event conducted in OTA.
- It's the national camp and only 6 members from each directorate were participated.
- He interacted with every person from all over the country about SSB.

PROTOSEM

PROTOSEM is a first-of-its-kind program that embeds an innovation centred approach to engineering education right into the internal core of the engineering curriculum - innovation aimed at engineering tech enabled solutions for real-world industrial problems.

FORGE in collaboration with the Kumaraguru College of Technology [KCT] launched PROTOSEM (shorter version for Prototyping Semester), a full-semester curriculum integrated program offered independently by the Incubator. This course is currently completed by 2 of our 3rd year MCE students in the fifth semester.

In the current 8th semester 5 of MCE students are selected to do project work in PROTOSEM.

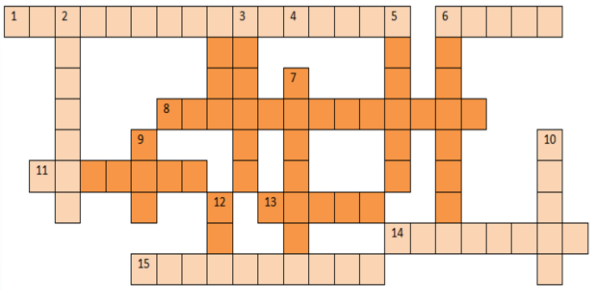
Students design & fabricate minimum usable commercially viable product with the guidance of industry experts that generate sustainable and profitable revenues.

Outcome of the Program:

It creates a higher level of confidence among the students to pursue innovation and entrepreneurship as their primary career path after graduation.

Adithya Kamaraj 14BMC004
Prajit KK 14BMC036
Radha S 14BMC041
Shouvik Basu 14BMC054
Tarun Reddy D 14BMC057

ROBOTICS CROSSWORD



ACROSS

1. Store electrical energy temporarily in an electric field.
4. Toothed machine part that meshes with another toothed part to transmit motion or to change speed or direction.
6. Machine capable of carrying out a complex series of actions automatically, especially one programmable by a computer.
8. Light-dependent resistor which slowly loses its resistance when exposed to high levels of ultraviolet light.
11. Container in which chemical energy is converted into electricity and used as a source of power.
13. Thread of metal that is covered with plastic, rubber, etc., and used to send or receive electricity or electrical signals.
14. An electrical component that reduces the electric current.
15. Robotics kits from Lego containing hardware and software to create customizable, programmable robots.

DOWN

2. Sequence of instructions, written to perform a Specified task on a computer.
3. Electrical component that can break an electrical circuit, interrupting the current or diverting it from one conductor to another.
5. A transducer whose purpose is to sense (to detect) some characteristic of its environments.
6. Branch of technology that deals with the design, construction, operation, and application of robots.
7. Open-source electronic prototyping platform allowing creating interactive electronic objects.
9. Series of kits containing hardware to create customizable, programmable robots.
10. An electrical machine that converts electrical energy into mechanical energy.
12. Electronic device that emits light when an electrical current is passed through it.

CAPACITORS	WIRES	LED	VEX
ROBOT	MOTOR	SENSOR	PROGRAM
ROBOTICS	BATTERY	SWITCH	INDSTORMS
GEARS	PHOTORESISTOR	RESIST OR	ARDUINO

ATTENDED

- **Dr.R.Venkatesan/HoD MCE** attended to understand the Recent trends in the higher education - National Higher Education Conclave 2017
- **Dr.R.Venkatesan/HoD MCE** attended Meeting Industry Expectations & "Creating a Truly Learning Environment" "Effectiveness of programs and Knowledge (both information and content) dissemination" in PALS – Partner Institute Summit 2017 18th November, 2017 at KSR College of Technology, Thiruchengode
- **Dr.A.Vasuki/Prof.** attended Interactive Workshop on "Industry Academia Collaboration" conducted by SERB, FICCI, at Taj Vivanta, Coimbatore, 19th Dec. 2017.
- **Dr.A.Vasuki/Prof.** attended FDP on "Big Data Analytics", organized by Department of IT, School of Information Technology, Kumaraguru College of Technology, Coimbatore, from 24th Nov. to 1st Dec. 2017.
- **Dr.A.Vasuki / Prof** Chairperson for the Technical Paper Presentation Session during the National Conference on "Research Issues in Image and Signal Processing NCISP2017", Department of Electronics and Communication Engineering, Sri Ramakrishna Engineering College, Coimbatore, on 23.11.2017.
- **Dr.A.Vasuki / Prof** attended FDP on "MATLAB for Research and Computing", Department of EIE, Kumaraguru College of Technology, Coimbatore, from 4th to 10th October, 2017.
- **Dr.K.Akila / ASP** attended 7 days FDP on "Big Data Analytics" conducted by School of Computing and Robert Bosch from 24.11.2017 to 01.12.2017.
- **Dr.K.Akila/ASP** attended 7 days FDP on " MATLAB for Research and Computing " from 04/10/17 to 10/10/17 conducted by MathWorks
- **Dr.K.Akila / ASP , Ms.B.Sabitha /AP (SRG)** attended 2 days workshop on " Embedded Robotics:" conducted by Robotics and Automation Engineering department , PSG college of technology from 22.09.2017 to 23.09.2017
- **Dr.M.Saravana Mohan/ASP** attended two weeks FDP on IoT on Smart Internet Working Techniques and Framework for Next Generation Smart Environments at EEE Department, KCT
- **Dr.M.Saravana Mohan/ASP & Mr. A.Ramkumar/AP** was members of an inter disciplinary Faculty team of **TNIGC** HACKATHON#2 organized forge forward . The objective was to pitch a potential idea that evolve as a startup and hacked for continuous72 hours to become a Faculty Entrepreneur.

- **Dr.M.Saravana Mohan/ASP, Mr.A.Ramkumar/AP-II** attended Industrial robotics conference organized by Yaskawa robotics and AXIS automation.
- **Mr.A.Ramkumar/AP II, Mr.R.Raffik /AP,** attended Technical Seminar and Certification launch Programme, organized by SIEMENS and COREEL Technologies.
- **Mr.R.Raffik/AP** attended AICTE sponsored two weeks FDP on "Emerging Trends and Advances in Mobile ROBOTS for Industrial Applications" at Kongu Engineering College.
- **Mr.T.Suresh/AP-II, Mr.R.Raffik/AP, Mr.R.Saravanan/AP, Mr.K.Murugesan/AP** attend TEQIP-III sponsored short term course on "Advances in welding and Materials Processing - at PSG College of Technology
- **Mr.R.Saravanan/AP** attended NDRF sponsored All India Seminar on Technologies for Identification Tracking and Neutralization of Unauthorized Drones
- **Mr.R.Saravanan/AP, Mr.P.Magudapathi/AP , Mr.K.Murugesan/AP** attended one day FDP on Lean Manufacturing 17th Nov 2017 organized by Roots Industry
- **Mr.P.Anush /AP** attended Solid state drive class organized by Anna University
- **Mr.P.Anush /AP** attended FDP on MATLAB for Research and Computing on 04-10-17 to 10-10-17 conducted by MathWorks.
- **Mr.K.Murugesan/AP** attended BOSCH Inscribe 2017 - iNSCRIBE 2017 (Technical paper presentation)
- **Mr.P.Magudapathi/AP** attended 6 weeks online course on Basics of Entrepreneurship Development Programme in Agriculture organized by IIT Kanpur.
- **Mr. J.Sivaguru / AP** attended Training By Infineon at Bosch center- DEMS KIT

STAFF ACTIVITIES

PUBLICATIONS

The following paper were published in the International Journal

- **Dr.R.Venkatesan**
  Experimental Investigations of the Chatter Stability In Boring Operations with Semi-Active Magneto rheological Fluid Damper J.CSME, Vol.39, 2018
- **Dr.R.Venkatesan**
  Evaluation of Surface Integrity in Milling Of Magnesium Alloy Using Artificial Neural Network And Genetic Algorithm, Journal of Materials and Technology, 2018.
- **Dr.A.Vasuki**
  A Broadbanding Microstrip Patch Antenna Using Electromagnetic Band Gap Structures", International Journal of Pure and Applied Mathematics, Vol. 116, No. 11, pp. 71 – 79.
- **Dr.A.Vasuki**
  Reduced Order Generalized Integrators Based Collective Control Strategy For Dfig System During Network Unstability", International Journal of Electronics, Electrical and Computational System (IJEECS), Volume 6, Issue 10, October 2017, pp.62 – 68.
- **Mr.P.Magudapathi**
  Review on Non Traditional Machining of Metal Matrix Composites International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; Valume:6 Issue, January 2018
- **Mr.P.Anush**
  Cost Optimization For Energy Consumption in Microgrid using ZIGBEE International Journal of Advanced Research Trends in Engineering and Technology (IJARTET) ISSN: 2394-3777 (Print)Vol. 4, Special Issue 12, March 2017

BOOK CHAPTER

- **Dr.A.Vasuki** (2017), *Chapter Title :* Certain Applications and Case Studies of Evolutionary Computing Techniques for Image Processing, *Book Title :* Biologically Rationalized Computing Techniques for Image Processing Applications, Lecture Notes in Computational Vision and Biomechanics, Vol. 25, Springer International Publishing, pp. 273 – 296.

- **Dr.A.Vasuki,** S.Govindaraju (2017), *Chapter Title :*Deep Neural Networks for Image Classification, *Book Title:* Deep Learning for Image Processing Applications, Advances in Parallel Computing, Vol. 31, IOS Press, pp. 27 – 49.

PROJECT

Dr. M.Saravana Mohan/ASP the proto mentor guided the proto team-6 (Kavi Raja K, EIE, Hemalatha R, IT, PayreshVarman U, EEE) to develop the MUP "Smart-Kit For Machine Idle Time Monitoring" for Sri Krish Automation. This was also provisionally patented.

The students of the prototeam installed the necessary electronic components in the CNC machine to collect the necessary current related data at Sri Krish Automation, Coimbatore.

CONDUCTED

GUEST LECTURE

- Guest Lecture on **"AUTOMATION IN PACKAGING INDUSTRIES"** held on 16.11.2017 in Mechatronics Engineering at Kumaraguru College of Technology, Coimbatore.
- Guest Lecture on "**APPLICATIONS OF SIGNAL PROCESSING**", for III year (V Sem) MCE students, on 08.11.2017 (2–4 pm), by Ms.N.Kavitha, Director, STEPS Knowledge Services Pvt. Ltd., Coimbatore. As part of the Guest Lecture, DrishTI online contest was conducted for the students and two students have won prizes (Mr. Pragadheeswaran G, Mr.Manodhayan III Year)

INSITUTION

VISION

The vision of the college is to become a technical University of International Standards through continuous improvement.

MISSION

Kumaraguru College of Technology is committed to providing Quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set the students on the path to leadership.

DEPARTMENT

VISION

The vision of the department is to achieve academic and industrial excellence in industrial automation research and innovative product development driven by mechatronics systems.

Mission

- Impart the right blend of knowledge and skills to students and enable them to apply it in real life situations.
- Motivate the students towards interdisciplinary research to cater to the local and global needs.
- Achieve innovation in developing industrial products with social responsibility

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

1. Develop innovative and sustainable products with multidisciplinary Engineering expertise.
2. Solve complex engineering problems by applying mechanical, electrical and computer knowledge and engage in lifelong learning in their profession.
3. Work or pursue higher education in multicultural, multilingual and multinational environment with competent oral and written communication.
4. Lead and contribute in a team entrusted with professional, social and ethical responsibilities.

PROGRAM OUTCOMES (PO)

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. .
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes

1. Design and develop Mechatronics systems to solve the complex engineering problem by integrating electronics, mechanical and control systems.
2. Apply the engineering knowledge to conduct investigations of complex engineering problem related to instrumentation, control, automation, robotics and provide solutions.

குமரகுரு
தொழில்நுட்பக் கல்லூரி

அய்யா

வணங்குகிறோம் வழிநடப்போம்

உங்கள் வாழ்க்கை - எங்கள் பாதை

kct.ac.in
fb.com/kct.edu

KCT Yugam 2018
WEAREBACK
WEARENEW
kctyugam.com