

Vision:

To equip women with excellent education in
Computer Engineering enabling them to play
significant leadership roles in technology and society



Cummins College of
Engineering for Women

Maharshi Karve Stree Shikshan Samstha's
Karve Nagar, Pune

ECHO



To err is human,
but to really foul things up you need a computer.
-Paul R. Ehrlich

COMPUTER DEPARTMENT

OCTOBER 2016

ISSUE 16

Mission

1. Impart excellent education, necessary skills, training and experimentation capabilities in the field of computer science and engineering.
2. Create a vibrant and an intellectually stimulating environment for students to promote innovative and multidisciplinary real world problem solving.
3. Develop women professionals and imbibe work ethics and leadership skills in them, thereby helping them pursue successful career and contribute to science and technology.
4. Collaborate with industry and other universities to help create competent computer professionals.
5. Strive to fulfill the expectations of all relevant stakeholders.

Program Educational Objectives (PEOs)

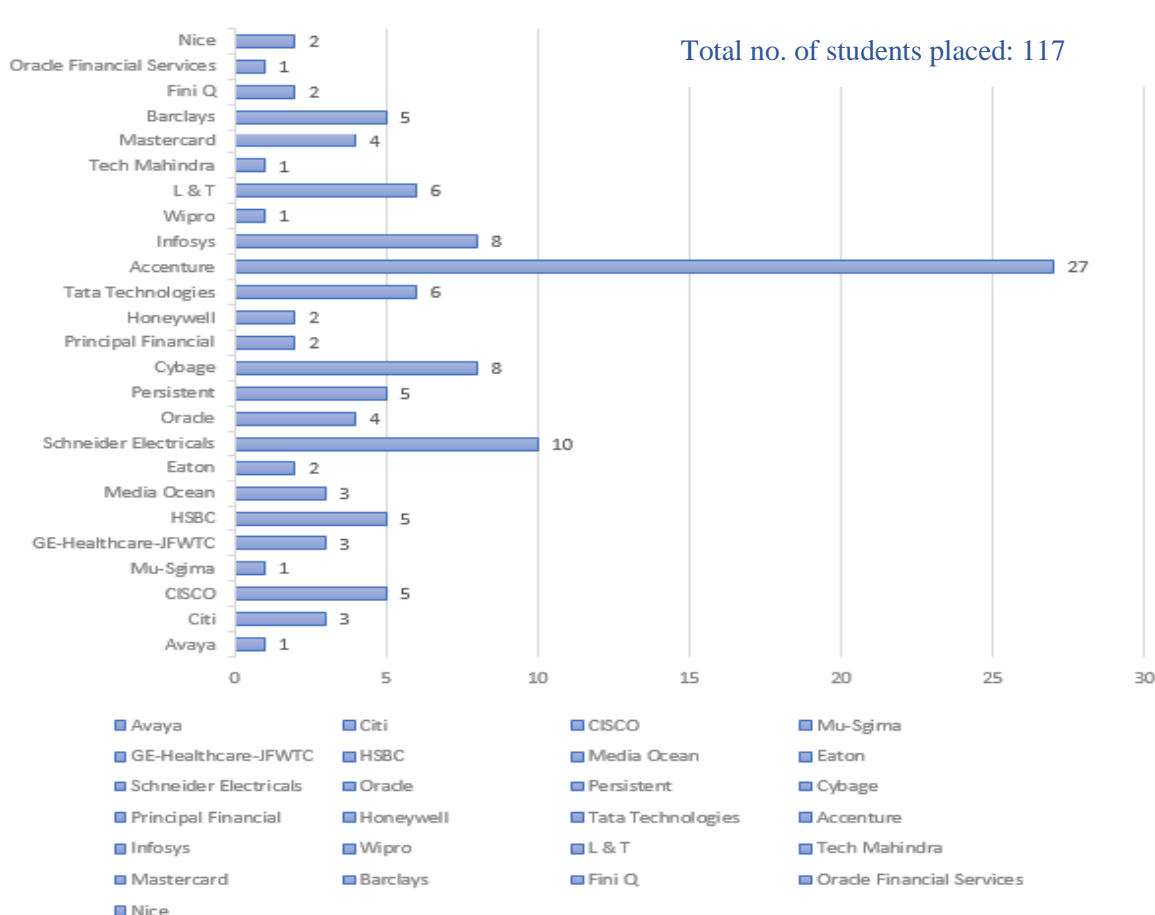
1. To prepare students for academic competence, to be employed as computer professionals, for industry, higher studies, research, entrepreneurship and to significantly contribute to the society at large.
2. To develop students' fundamental knowledge related to mathematics, science, computer science, computer engineering and to make them capable of providing solutions to challenging problems and multidisciplinary problems.

3. To enrich students with soft skills, leadership skills, professional skills and work ethics to make them good computer professionals and role models for future generations.
4. To prepare students capable of self-learning, to have the ability to adapt to changes and to possess the ability to understand the impact of engineering on society and humankind.

Program Specific Outcomes (PSOs)

1. Graduates capable of working in various domains, solving problems by applying knowledge and skills from Software Development, Networking, Databases, Internet of Things, and Embedded systems.
2. Graduates capable of developing, maintaining software services, software products and embedded systems by applying the entire software development life cycle.
3. Graduates capable of communicating effectively and understand and implement client requirements in various domains with a realistic view of all constraints and sustainability.
4. Graduates capable of pursuing successful careers in industry, higher studies, research, and expected to adapt and contribute to ever-changing and evolving trends.

PLACEMENT DATA (2016 – 17)



Toppers:

BE TOPPERS			
Rank	Name	Marks	%
1	Harsha Vithalrao Deshmukh	1241/1500	82.73
2	Sannidhi Shekhar Teredesai	1187/1500	79.13
3	Sanika Mangesh Shetye	1161/1500	77.40
TE TOPPERS			
Rank	Name	Marks	%
1	Vaswani Nain Sanjay	1122/1500	74.80
2	Gaikwad Nehal Dhananjay	1103/1500	73.53
3	Lunkad Pratima Girish	1091/1500	72.73
SE TOPPERS			
Rank	Name	Marks	%
1	Sarna Latika Rajeev	1185/1500	79.00
2	Shelke Mamta Dattatray	1170/1500	78.00
3	Chinchankar Devangi Vilas	1161/1500	77.40

“Cummins Fellowship Program at Purdue”

STUDENTS SELECTED(Fall 2016):

- 1) Aishwarya Gupte
- 2) Harsha Deshmukh

GO-GETTERS

Technical Participation

- 1) Rafiya Sheikh is selected for HackerEarth Campus Ambassador and Firefox Student Ambassador Program.
- 2) Sarika Joshi is selected for Wooplr Student Ambassador Program.
- 3) Riya Tirole is selected for Intershala Student Partner and Firefox Student Ambassador Program.

Sportsman Spirit

- 1)Shevi Jain, Hemangi Talashilkar and Mamta Shelke won the first prize in Table Tennis organized by Savitribai Phule Pune University, Pune.
- 2)Shivani Bhoite was 2nd runner up in football match in national level matches held at MAEER's MIT, Pune held in September 2016.

OTHER ACCOMPLISHMENTS

Purushottam Karandak

- 1)Sharayu Dhote won Mai Bhide Award in purushottam karandak 2016 in the drama “Chitri”.
- 2)Shambhavi Shete and Purva Munghate won a consolation prize for best actor in Purushottam Karandak.
- 3)Participation in Purushottam Karandak:
 - i. Dhanashree Lonkar
 - ii. Aishwarya Kulkarni

iii. Apurva Shekhar

iv. Rupali Patil

v. Praniti Sapkal

vi. Sayali Patil

vii. Vagisha Sinha

Noteworthy Achievements

Dhrishti Jain from Second Year Div-A won the title “Eco-Warrior” by PCMC on 5th June 2016. She is the only girl selected for this title. Her valuable contribution for the environment was mentioned in the newspaper “Sakal” on the same day.

She is selected from Pune for United World College Summer Studies TGIF (International). She conducted a Python workshop on behalf of PyLadies at college level.

Faculty Achievements

- 1) Prof Dr. S. Arora reviewed Ph.D. Thesis. She was also an External Examiner during May 2016 at Banasthali University, Rajasthan.
- 2) Prof. Dr. S.A. Jahirabadkar was the co-authored the book ‘BIG DATA Analytics’ (ISBN: 978-81-203-5116-5)
- 3) Prof. Dr. S. M. Kelkar was the session chair for International Conference on Advances in Signal Processing (CASP-2016) at CCOEW, Pune
- 4) Prof. R. Holkar completed M.Tech at COEP, Pune in July 2016.
- 5) Prof. Dr. S. M. Kelkar was a resource person for ‘Computer Organization and Architecture SE(2015 course)’ at NBN SOE, Pune during June 2016.
- 6) Prof. Dr. S.M. Kelkar was the member of Advisory Committee for conference on Global Trends in Signal Processing, Information Computing and Communication (ICGTSPICC 2016)

Faculty reviewers in Conferences

- 1) Prof. Dr. S. M. Kelkar, Prof. Dr. S. A. Jahirabadkar, Prof. Dr. S. Arora, Prof. M. P. Tasgaonkar and Prof. S. S. Deshpande: - The IEEE International Conference on Computing, Analytics and Security Trends (CAST-2016).
- 2) Prof. Dr. S. M. Kelkar: 2016 International Conference on Internet of Things and Applications (IOTA 2016)
- 3) Prof. Dr. S. A. Jahirabadkar, Prof. C. S. Gosavi and Prof. P. A. Deshpande : International Conference on Advances in Signal Processing (CASP 2016)
- 4) Prof. S. Arora: IACC 2017 Hyderabad

Publications by Faculty

- 1) Prof. M. P. Tasgaonkar published a paper on 'Using Differential Morphological Profiles for Microaneurysm Detection in Diabetic Fundus Images' at the International Conference on Signal and Information Processing (IConSIP2016) at SGGGS, Nanded during 6th October to 8th October 2016.
- 2) Prof. P.G. Date published a paper on Proximity Based and Security Aware Rewarding System for Mobile Marketing at the International Conference on Advanced Signal Processing (CASP 2016), sponsored by IEEE & IET held in CCOEW on 10th and 11th June 2016.

Workshops attended by faculty members

- 1) Prof. V. S. Pimprale, Prof. S. R. Nagpurkar and Prof. J. G. Chourasia attended one day FDP on Object Oriented Programming at VIT, Pune on 14th June 2016.
- 2) Prof. A. U. Hajare and Prof. V. M. Salgar attended one week TEQIP-STTP on LaTeX-Article and Report Writing at Govt College of Engineering, Karad during 9th May 2016 to 13th May 2016.
- 3) Prof. R. K. Kulkarni attended one day FDP on Data Structures and Algorithms on 11th June 2016 at SITS, Narhe, Pune.
- 4) Prof. N. H. Deshmukh attended one day FDP on Computer Organization and Architecture on 24th June 2016 at NBN, Sinhadgad School of Engineering, Ambegaon, Pune.
- 5) Prof. M. P. Tasgaonkar and Prof. S. S. Barekar attended a two-day FDP on Digital Electronics and Logic Design at I² IT, Pune from 17th June 2016 to 18th June 2016.
- 6) Prof. N. Korla attended one day FDP on Discrete Mathematics at Keystone School of Engineering Pune on 14th June 2016.
- 7) Prof. A. N. Muchrikar, Prof. H. S. Khairnar, Prof. A. M. Naik, Prof. A. U. Hajare, Prof. V. M. Salgar, Prof. S. S. Shelke and Prof. M. P. Deore attended a Four-week AICTE approved FDP by IIT Bombay on "Use of ICT in Education for Online and Blended Learning" under the National Mission on Education through ICT (MHRD, Govt. of India) at CCOEW, from 2nd May '16 to 10th July 2016.

Guest Lectures

- 1) A guest lecture on "Problem solving with Gamification" was arranged by Prof. H. S. Khairnar for the students of final year on 30th June 2016 that was delivered by Mr. Siddhesh Bhoje, CEO, eMee, Center Head (Pune), Persistent System.
- 2) Prof. Dr. S. Arora arranged a guest lecture on

"Banking 2.0" for the third year students, that was delivered by Mr. Himanshu Warudkar, Director- India Digital Office Barclays Technology on 22nd July 2016.

3) On 25th July 2016, Dr. S. Arora arranged a talk on "Trends in Advanced Computing" for the students of final year and it was delivered by Prof. Dr. L. M. Patnaik, Dept. Of Electronic System Engineering, IISC, Bangalore.

4) Prof. Dr. S. M. Kelkar and Prof. A. U. Hajare arranged a lecture on "OS Fundamentals and Scheduling" on 29th Aug 2016. It was delivered by Dr. Abhijat Vichare, Consultant, Faculty at PCI (Persistent Computing Institute) for the students of third year.

5) A talk on "Cyber Security" was conducted by Mr. Sanjay Panmand (Cyber cell, Pune Police) for the students of third year. It was arranged on 7th Sept 2016 by Prof. V. M. Salgar and Prof. A. V. Ogle.

6) Prof. R. A. Dongaonkar and Prof. S. R. Patil arranged a talk on "Machine Learning" for the students of third year on 13th Sept 2016. It was delivered by Dr. Sharad Saxena and Mr. Manoj Singh, Senior Analytical Training Consultants in SAS Global.

7) A session on "Contextual Text mining and Natural Language Processing" was delivered by Dr. Yashodhara Haribhakta (Associate Professor, Dept. Of Computer Engineering and IT, College of Engineering, Pune) for the final year students on 29th Sept 2016. It was arranged by Prof. Dr. S. A. Jahirabadkar and Prof. P. A. Deshpande.

8) Prof. P. A. Deshpande also arranged a session on "Speech Processing" for the final year students. It was conducted on 29th Sept 2016 by Mr. Purushottam Ekande, Computer Vision Consultant.

9) Prof. Dr. S. Arora delivered a guest lecture on 'Parallel Algorithms' on 27th September 2016 at D. Y. Patil COE, Talegaon, Pune.

FACULTY ARTICLE

BE-Project

The final year B.E. project is an academic group activity. This activity provides a good exposure to final year students to learn lot of technical and project management skills during the entire project life cycle development. Majority of the projects are sponsored by leading IT companies. Some projects are also supported by faculty members. Problem statement may be real time, proof of concept based or research oriented. Students do projects in various areas such as Web based Application, Social, Mobile Application, Cloud Computing, Big Data analytics, Networking & Security, etc. Faculty initiated in-house projects are in various domains such as Image

Platforms like Azure, Bluemix, Kinect, WebGL, Hibernet, Android, Cassandra, MongoDB, ROBOTOS, Hadoop, Phonegap, docker, open MP, Libvirt, R tool, etc.

- Prof.S.P Mengale & Prof. M.P. Deore

Faculty Development Program, 2016

A four week AICTE approved Faculty Development Program (FDP) on “Use of ICT in education for online and blended learning” was conducted by IIT Bombay on 2nd of May 2016. The emphasis of FDP was using ICT effectively for online learning .It included online education methodology, blended learning, flipped classrooms. This FDP was designed as a MOOC (Massive Open Online Course)

MOOC is used for blended learning which is a student centered approach to creating a learning experience whereby the learner interacts with other students, with the instructor and with content through thoughtful integration of online and face to face environment.

MOOC also introduces distance learning and flipped classroom, flipped classrooms is an instrumental strategy that reverses the traditional learning environment. Short videos and lectures are viewed by students at home before the class sessions while in class time is devoted to exercises, projects or discussions.

The first week of the course started with an overview of online and blended teaching, learning practices with the trail use of Wikipedia for creating portfolios. The second week was about planning, teachers were encouraged to plan TPS (Think Pair Share) activities for students which included in the classroom as well as outside. Focus of the third week was on creating, reviewing, storing, and accessing digital contents. During the fourth week process of engaging learners in group discussion and along with that peer assessments were discussed. Fifth week was about effective use of moodle , which is a platform for organizing content related to a particular subject ,creating quizzes related to it , and based on which online submissions assessments and course grading is done.

Course discussed evolution of different content management systems (CMS) like WordPress and Drupal. In this course the importance of Open Educational Resources (OER) was discussed. The FDP also highlighted how effective collaborative learning, teaching and research is, during FDP every participant was involved in preparing online individual assignments as well as team assignment preparation and assessment.

Six faculty members Prof. A. N. Muchrikar, Prof. A. M. Naik, Prof. A. U. Hajare, Prof. H. S. Khairnar, Prof. M. P. Deore, Prof. V. M. Salgar from our department

attended the FDP.

Prof. Mahendra Deore received an award as one of the top performer among 4000+ participants.

The FDP was a great learning experience which introduced new techniques of teaching and learning.

-Prof. M. P. Deore

(Student co-ordinator Nikita Nikale)

ALUMNI INTERVIEW

Every year about 540 students pass out of CCOEW. Each one finds a different path and a different career opportunity to excel in the future. Most of our ex-students have been able to achieve the pinnacle of success in their career. The Team *ECHO* of Computer dept. CCOEW, was fortunate enough to get in touch with one such Alumna- **Mrs. Vinita Gera** hailing from the first batch of Computer Engg. Department in 1995.

Vinita Gera is the Vice President, Engineering at *Vuclip*. Vuclip is a startup along with being the leading premium mobile video on demand service for emerging markets with more than 7 million subscribers per quarter. Prior to Vuclip, Vinita has mainly worked in the space of ITSM, BSM, Backup, and Shared Services. Vinita was responsible for the success of BMC's SaaS ITSM solution – Remedyforce and helped build it from its first version. She lead the product delivery globally. Vinita is a Certified Executive Coach from International Coach Federation, Australia, an ITIL V3 Certified and a Certified Scrum Master.

Following is the excerpt from our interview with Vinita Gera:

--Talking about life at CCOEW--

What influence does this college have in your life and your career?

The strong fundamentals of computer science were set in college for me along with other important qualities like focus , hard work and a right attitude.

What were your academic strengths and weaknesses? How did you develop your strengths and overcome your weaknesses?

The subject I enjoyed the most was not the most commonly liked subject which is *Principles of Software Engineering*. I loved the Pressman text book and was fascinated by the theories explained. My weakness was Electronics. However, I worked purely in the software space the weakness fortunately did not have an impact.

What can be accounted as a differentiator of Cummins College as per your views?

Cummins College has the unique blend of the seriousness of a school and the research backing of a college. That makes it one of the institutes delivering

consistent results along with having a very well rounded development for students.

Any interesting memories you would like to share from your college days?

I was a day scholar when in college but had many friends in the hostel. I used to sneak into the hostel often and enjoy the experience as I had never lived in a hostel. I loved that time the most!

-Talking about her Career in Technology--

What motivated you in your early years to choose a career in technology?

Honestly speaking, it wasn't a very conscious choice. Back in 1995, I had handled a computer only once in a remote lab along with seeing floppy drives and playing a Pacman game. Beyond that, I felt that there were very few career choices in technology. Yet, it did interest me and then having my family's encouragement I made this choice.

How would you describe the corporate culture you work in?

I have seen a huge transformation from when I started my corporate life till present. At that time, it was mostly maintenance work and outsourcing that were found in India. Now we have full products being developed here. I have also had this wonderful opportunity to do this work twice in my career where the entire product development was done by my team. The corporate culture is very empowering with cutting edge work being done. The culture you will step into has wonderfully evolved and I believe this to be a great time to enter the corporates and expand your skills.

What entry-level opportunities are there for new computer graduates in this field?

The sky is truly the limit for grad- students fresh out of the college. Most organizations actually value the fresh, sharp and energetic talent right out of college and tap into it. There are any varied roles they can play and thus have many career choices to make.

Would you like to share any such experience in your career that made a lasting impact on your mind?

I have so many stories and experiences that have had a major impact and have helped me grow. But if I were to pick the one that had most impact - 'it is when I lost my job in 1999 and the client decided to shut operations for the company I worked for. That was so painful since I was very young and thought it was all my fault (even though it was a very operational shut down and not an individual's performance). But between that day and now- I have never taken my job for granted. I am always prepared for the worst and that helped me immensely for all that I am today.

--Her view about life after CCOEW--

How do you manage to maintain the balance between career and family?

This has never been a big issue as I had a lot of support from my extended family. The only phase that is tricky is when your children are small. Work life balance is a very overrated topic honestly. One just has to

ruthlessly prioritise, learn to say no, build ecosystems, outsource what can be outsourced and learn to smile and enjoy this very journey. It's all about the choices we make. Clarity is extremely necessary to achieve the balance.

Would you like to share with us any of your "success mantras" in life?

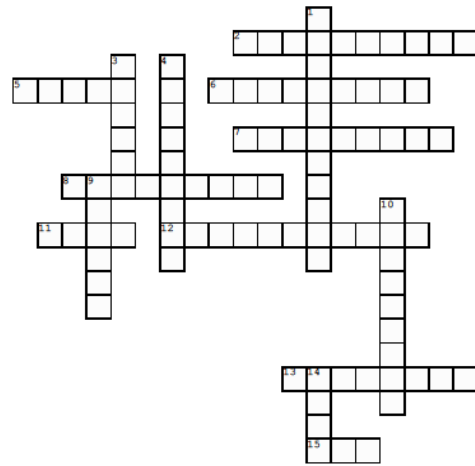
'Live life Queen Size.' -has been my life mantra.

What is your vision for your alma mater?

The way Cummins has headed, especially after going autonomous, is truly commendable. I would totally think it is going to soon be the most sorted college in the country - if not already. But more than that, I see that the industry will gain several success stories earned by students of our college. Go Cummins!

[CROSSWORD]

Database Management Systems and Applications



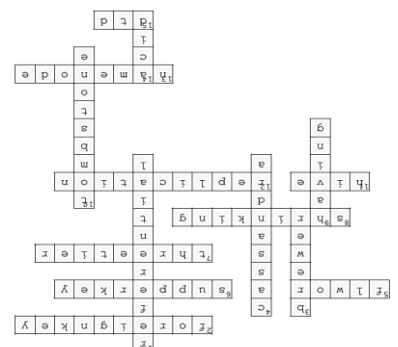
Down

- 1. This integrity is caused in RDBMS when a table has a foreign key
- 2. This computer scientist coined the CAP theorem
- 4. It is a free and open-source distributed DBMS by Apache
- 9. A clause in Select query with group by, used for filtering condition
- 10. A logical deletion in large databases
- 14. These are the properties of a transaction

Across

- 2. It is a primary key in the other table.
- 5. An expression in XQuery that supports select like operation
- 6. It is a key is formed with the minimum number of columns required to uniquely identify each row in a table
- 7. Online shopping is an example of this kind of architecture
- 8. A phase in the 2-phase locking protocol that releases locks
- 11. This is an example of data-warehouse in Hadoop Architecture
- 12. This along with fragmentation is a key feature of any distributed database
- 13. A specialized Data node in HDFS that serves as master server.
- 15. It is a list of rules for element patterns appear within an XML file.

ANSWER KEY:



Teaching coordinators:

- Prof. S. V. Tikhe
- Prof. S. S. Mandke
- Prof. S. R. Patil

Student coordinators:

- Rasika Kshirsagar
- Vaishnavi Iyer
- Nikita Nikale
- Chaitali Ghag