

Mahatma Education Society's

Pillai College of Engineering

Dr. K. M. Vasudevan Pillai Campus, Sector16, New Panvel, Navi Mumbai (M.S.) 410206

INFORMATION FOR ACADEMIC AND ADMINISTRATIVE AUDIT OF THE DEPARTMENT (2018-2019)

(Provide information for last A.Y. 2018-2019)

- 1. Name of the Department: Electronics And Telecommunication Engineering
- 2. Year of establishment: $20\overline{07}$
- 3. Programmes offered: UG, PG, Ph.D.
- 4. Details of certificate/diploma program introduced in last academic year:

| SN | Program code | Program name | Name of the certificate/diploma introduced in last 5 years | Year of introduction | Link the relevant document |
|----|-----------------|----------------------------------|---|-------------------------|--|
| 01 | EXTC | | Networking and its Fundamentals | 2018-19 | https://drive.google.com/file/d/ 1ARqdW8uT_byedq_vNdKIi7 Ydmw1Tp3dr/view |
| 02 | EXTC | | Workshop on Web Designing | 2018-19 | https://drive.google.com/file/d/ 1STjPUPbWUA3pxMvUiuhI1 CPHeSzAsSJ4/view |
| 03 | EXTC | | Workshop on LABVIEW | 2018-19 | https://drive.google.com/file/d/ 19C4ltYUdWyo6TXrzt1PeCz zmLkFJy66h/view |
| 04 | EXTC | Electronics and Telecommun | Workshop on DBMS-SQL | 2018-19 | https://drive.google.com/file/d/ 1JTLgw9EjOWvWw8KzbOQ wKIaavfU4u-ql/view |
| 05 | EXTC | ication Engineering | Workshop on Advanced Web Development | 2018-19 | https://drive.google.com/file/d/ 1jS4SK8Z3uOQoQ5KP8RR2 KP3i0gG7pkbE/view |
| 06 | EXTC | | Workshop on Python | 2018-19 | https://drive.google.com/file/d/ 1mCGlumvAmiuqpC_PPJNtB NunrzQqPzEN/view |
| 07 | EXTC | | Workshop on Machine Learning | 2018-19 | https://drive.google.com/file/d/ 1Y_DILSvSZLXg7N7QLA8c ANLsty7fSLRM/view |
| 08 | EXTC | | Workshop on Arduino - I | 2018-19 | https://drive.google.com/file/d/ 1tovtoEsbT5wrVMiI0czBpa2 mZVmEOSyG/view |

| 09 | EXTC | IOT Workshop | 2018-19 | https://drive.google.com/file/d/ 1D9WtkrVyo0pgkoYTjTxdM LTo6T-VSgOd/view |
|----|------|--------------|---------|--|
| 10 | EXTC | NPTEL | 2018-19 | https://docs.google.com/spread sheets/d/1vurn0KERGFC- L7Z6BJpX0kCTvY51qzLHQy i88SUwUUM/edit?ts=5cb852 14#gid=0 |

5. Details of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council:

| Year | Name of Teacher | Name of the body in which full time teacher participated | RELEVANT LINK |
|------|--------------------|--|------------------|
| | | NA | |
| | | | |

6. Details of new Courses introduced of the total number of courses across all Programmes offered by the department :

| Name of the new course introduced in last A.Y. | Program name | Program code | Course code | Year of introduction | Link the relevant document |
|---|-------------------------------|-----------------|----------------|----------------------|----------------------------------|
| Microprocessors and Peripherals Interfacing | | | ECC 501 | 2018-19 | https://drive.g oogle.com/fil |
| Digital Communication | | | ECC 502 | 2018-19 | <u>e/d/1JxsmJd</u> UGIs_Kgagx |
| Electromagnetic Engineering | | | ECC 503 | 2018-19 | ZvYvlUJPA- x4SWv5/vie |
| Discrete Time signal Processing | | | ECC 504 | 2018-19 | <u>w</u> |
| Microprocessors and Peripherals Interfacing Lab | Undergraduate | | ECL 501 | 2018-19 | |
| Digital Communication Lab | Electronics & Telecommunic | | ECL 502 | 2018-19 | |
| Business Communication and Ethics Lab | ation Engineering | | ECL 503 | 2018-19 | |
| Open Source Technology for Communication Lab | | | ECL 504 | 2018-19 | |
| Microelectronics | | | ECCDLO 5011 | 2018-19 | |
| TV & Video Engg |] | | ECCDLO 5012 | 2018-19 | |
| Finite Automata Theory | | | ECCDLO 5013 | 2018-19 | |

| Data Compression and | | ECCDLO | |
|---|--|----------------|---------|
| Encryption | | 5014 | 2018-19 |
| Microcontroller & Applications | | ECC601 | 2018-19 |
| Computer Communication Networks | | ECC602 | 2018-19 |
| Antenna & Radio Wave Propagation | | ECC603 | 2018-19 |
| Image Processing & Machine Vision | | ECC604 | 2018-19 |
| Microcontroller & Applications Lab | | ECL601 | 2018-19 |
| Computer Communication Networks Lab | | ECL602 | 2018-19 |
| Antenna & Radio Wave Propagation Lab | | ECL603 | 2018-19 |
| Image Processing & Machine Vision Lab | | ECL604 | 2018-19 |
| Digital VLSI Design | | ECCDLO 6021 | 2018-19 |
| Radar Engineering | | ECCDLO 6022 | 2018-19 |
| Database Management System | | ECCDLO 6023 | 2018-19 |
| Audio Processing | | ECCDLO 6024 | 2018-19 |

7. Details of the programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented:

| Name of all programs | Whether adopting CBCS course system(yes/no) | | Program Code | Year of implementation of CBCS/ elective course system | Link the relevant document |
|-------------------------|---|-----|-----------------|---|---------------------------------------|
| EXTC | YES | NA | SE EXTC | | https://drive.googl |
| | YES | YES | TE EXTC | 2017 10 | e.com/drive/u/2/fo lders/1qSEPm86d |
| | YES | YES | BE EXTC | 2018-19 | oo0mXAfzZmpdt gyAJKy193dy |

8. Details of students enrolled in subject related Certificate/ Diploma programs/ Addon programs :

| Year | Title of the programme | Type of the programme (Certificate/ Diploma programs/ Add-on programs) | Total Number of students enrolled in certificate or diploma or add-on programs |
|----------|---|--|---|
| DEC 2018 | Networking and it's Fundamentals | Certificate | 22 |
| MAY 2019 | Networking and it's Fundamentals | Certificate | 07 |
| 2018-19 | Workshop on Web Designing | Certificate | 23 |
| 2018-19 | Workshop on LABVIEW | Certificate | 32 |
| 2018-19 | Workshop on DBMS-SQL | Certificate | 28 |
| 2018-19 | Workshop on Advanced Web Development | Certificate | 28 |
| 2018-19 | Workshop on Python | Certificate | 43 |
| 2018-19 | Workshop on Machine Learning | Certificate | 45 |
| 2018-19 | Workshop on Arduino - I | Certificate | 82 |
| 2018-19 | IOT Workshop | Certificate | 51 |
| 2018-19 | NPTEL | Certificate | 02 |

9. Details of value added courses imparting transferable and life skills :

| SN | Name of the value added courses (with 30 or more contact hours) offered during last five years | Course Code | Year of offering | Year of discontin uation | Number of students enrolled in the year | Number of students completing the course in the year |
|----|--|----------------|---------------------|--------------------------------|--|--|
| 1 | Networking and its Fundamentals | NIF01 | 2018-19 | | 07 | 07 |
| 2 | Networking and its Fundamentals | NIF01 | 2018-19 | | 22 | 22 |
| 3 | C2C-English for oral communication | C2C | 2018-19 | | 17 | 17 |
| 4 | C2C-Financial Literacy | C2C | 2018-19 | | 17 | 17 |
| 5 | C2C-Handling large projects | C2C | 2018-19 | | 17 | 17 |

10. Details of the students undertaking field projects/ internships:

| Program name | Program code | No of students undertaking field projects / internships | Link the relevant document |
|-----------------|-----------------|--|---|
| EXTC | B.E. | 03 (Field Projects) 138 (Inhouse Projects) | |
| EXTC | SE,TE,BE | 98 Internships | https://docs.google.com/ spreadsheets/d/1H0jNq4 uvlrT1QtLU70- jS3ISUG2mQNjC1qwu F9h2NkE/edit#gid=155 4137095 |

11. Analysis with action taken report of feedback received from different stakeholders i.e. students, Alumni, Employer and teachers.

| SN | Stakehol der | Departm ent | Feedback Received | Action Taken | Link for Document |
|----|-----------------|----------------|---|---|--|
| 1 | Alumni | EXTC | Preparing Students for Entrance Exams | Gate training Session is conducted for final year EXTC and ETRX students | https://drive.google.com/ope n?id=1zJAlSvv4R_ehcsyKV Rq1vExgGvD6BIom |
| 2 | Student | EXTC | Need more practice session for Bessel Functions | Conducted 1 hour extra lecture with emphasis on applications of Bessel Functions and Conducted 2 hours batch wise tutorial per week to give students practice of Bessel Functions | https://drive.google.com/ope n?id=16jv5- IraHR7T8wXa2LD_9j859FL X1tEN |
| 3 | Teachers | EXTC | Introduction to PCM, Delta should be added | Covered in content beyond syllabus | https://drive.google.com/ope n?id=1wEPLdqbPacK08AOd Q_UurfgHz9gUVLzE |
| 4 | Teachers | EXTC | IV should be arranged for such applicative subjects | IV was arranged to Doordarshan for TE EXTC students on 8th October 2018 | https://drive.google.com/ope n?id=1FT11QTEcPATCpa2u 4vdnxWKul0dYAsLS |
| 5 | Teachers | EXTC | There should be Workshop on Python Programming | Workshop on Python was conducted on 9th March 2019 | https://drive.google.com/ope n?id=14iy48IXLiODCIRtNE HF7gJ6B_087SUVW |
| 6 | Teachers | EXTC | Some Workshop should be arranged for students for better understanding of the subject | Workshop is conducted for the students on DBMS SQL by Prof.Smita Joshi on 2nd Feb 2019 | https://drive.google.com/ope n?id=1gv2H2VZE- wxcjPRjc8qrRifwhAv8pJqp |
| 7 | Teachers | EXTC | Books and syllabus coverage is adequate but still many examples or topics covered in CCNA/MCSE courses can be added. | Prof. Harsha Sharma successfully conducted course on "Networking and it's Fundamentals" during Dec 17th- 21st. 2018 | https://drive.google.com/ope n?id=1gaoWHCu6Lxj3OByy JTkiQL637NUL0pUf |

12. Number of students from other States and Countries admitted in the department:

| Year of enrolment | | Number of students enrolled from other countries | Link of the relevant document |
|----------------------|-----|--|---|
| 2018-19 | 01 | NIL | https://docs.google.com/spreadsheets/d/1c4cDqNVXwI7svS E4mXDQRhm7ML4wUtvQr- EPrc0cHHQ/edit#gid=1211825087 |
| 2017-18 | 01 | NIL | https://docs.google.com/spreadsheets/d/1fPVgi2MMVOQx WuClYVCG6RKKr1lj8DKZd5s- Dorrf5M/edit#gid=1142085868 |
| 2016-17 | 02 | NIL | https://docs.google.com/spreadsheets/d/1j-GL5ZCHc_X9f5t- PncIHTHgZtFUHraWhHCxS1Jq-j8/edit#gid=312442627 |
| 2015-16 | 02 | NIL | https://docs.google.com/spreadsheets/d/1fl_y9U1jy- _hMff7APsocaapjhL4hd1aoCaHYxXzXUY/edit#gid=91237 0418 |
| 2014-15 | NIL | NIL | https://docs.google.com/spreadsheets/d/1sVzLy3WNy1VUo Z8Eioio6DaLGFM1YZ1fzjjzuB88cVU/edit#gid=880405310 |

13. Total number of students admitted in the department:

| Year | Program name | Program Code | Total Number of Seats Sanctioned | Total Number of students admitted |
|---------|--------------|--------------|-------------------------------------|--------------------------------------|
| 2018-19 | | FE (2018-19) | 120 | 82 |
| 2017-18 | | FE (2017-18) | 120 | 105 |
| 2016-17 | EXTC | FE (2016-17) | 120 | 94 |
| 2015-16 | | FE (2015-16) | 120 | 82 |
| 2014-15 | | FE (2014-15) | 120 | 83 |

14. Number of seats filled against seats reserved for various categories(including Divyangjan) in the department:

| 29 % of total sanctioned seats | Year | Number of seats earmarked for reserved category as per GOI or State Government rule | | | Number of students admitted from the reserved category | | | | |
|--------------------------------------|---------|---|----|-----|--|----|-----|-----|--------|
| | | SC | ST | OBC | SC | ST | OBC | Gen | Others |
| 35 | 2018-19 | 16 | 8 | 23 | | | 08 | 72 | 02 |

| Name of the student enrolled under Differently abled Category | Gender | UDID Card Number | Type of Disability | Percentage of Disability | Program enrolled | Year of Enrolment | |
|--|--------|------------------------|-----------------------|-----------------------------|---------------------|----------------------|--|
| NO STUDENTS | | | | | | | |

15. Special programmes conducted by the department for advanced learners and slow learners: Provide the list along with the proofs for the activities undertaken by the department for advanced and slow learners.

EXTC department has well defined policies and procedures to allow for the identification of different types of learners. Faculty at PCE are trained to identify and support students with varying learning capabilities.

At the First year level, students are identified into different academic categories based on their performance in the first internal assessment test. The weaker students thus identified are given more attention and it is ensured that they are taught to do well enough to perform at least to a level of passing in the university examinations.

Course-in-charge and class counsellors during the teaching learning process identify the slow learners and advanced learners by observing their performance in different activities as well the results of various assessment processes during the semester.

Mentor Mentee scheme, wherein a small group of students is allotted to one faculty mentor, helps to monitor the progress and difficulties faced by the students.

Periodic Parent Teacher meetings are organised where faculty members, and mentors interact with the parents of all learners and update them about the performance of their ward. It helps to enhance the performance of slow learners and groom advanced learners.

Remedial classes are organized for the students who are not good performers. Additional support is offered through examination oriented coaching and well formulated question banks as well as notes prepared by faculty.

When the divisions are formed, the batch of students with least scores are identified and scrupulous plan to ensure more practice among these students during the practical sessions is also made. Senior teachers are usually allotted tosuch batches to ensure good performance.

Study camp sessions are conducted to ensure that the weakest of the students are made to practise a certain minimum number of problems/topics from curriculum to ensure their success in examinations and thus improve their chances of placement in the higher semesters.

Special counselling and extra classes are conducted for the students who have failed in any subject. Extra lab sessions, additional tutorial hours, links to e-books and subject related video lectures are some of the other initiatives for slow learners.

Extra time for slow learners with dyslexia is given during the university examinations.

Students having good academic records are encouraged to achieve higher ranks in university exams, and to take exams like GATE, GRE, TOEFL, IELTS, CAT etc. Teachers conduct extra sessions for students to prepare them for GATE examination.

Students having orientation towards research are motivated to present their work at conferences and competitions suchas Avishkar, and this has helped us in winning awards at the university and also the state level.

These students are also encouraged to become part of the student council and form other student groups. Student activity fund has also been initiated to ensure that students have funds to travel to different parts of the country to participate in various competitions. Due to our efforts, multiple student teams have won 1st place in the AICTE hackathon in 2019 and well as in 2018.

| Year | Number of students enrolled in the department(UG) | Number of students enrolled in the department (PG) | Number of full time teachers in the department (UG) | | Number of teachers teaching both UG and PG courses | STR |
|---------|--|---|--|----|---|------|
| 2018-19 | 360 | NA | 18 | NA | | 20:1 |

16. Student- Full time teacher ratio:

17. Number of teaching posts sanctioned, filled and vacant.

| Designation | Sanctioned | Filled |
|---------------------|------------|--------|
| Professor | 02 | 01 |
| Associate Professor | 04 | 04 |
| Assistant Professor | 12 | 13 |
| Total | 18 | 18 |

18. Number of full time teachers with Ph.D. degree:

| Year | Total No. Full time teachers | No. of teachers with PhD |
|---------|------------------------------|--------------------------|
| 2018-19 | 18 | 01 |

19. Details of full time teachers who received awards, recognition, fellowship at State, National, International level from government, recognized bodies:

| Year | | No. of teachers received awards/recognition/fellowship at State/National/International level | Relevant link |
|---------|----|--|---------------|
| 2018-19 | 18 | 02 | |

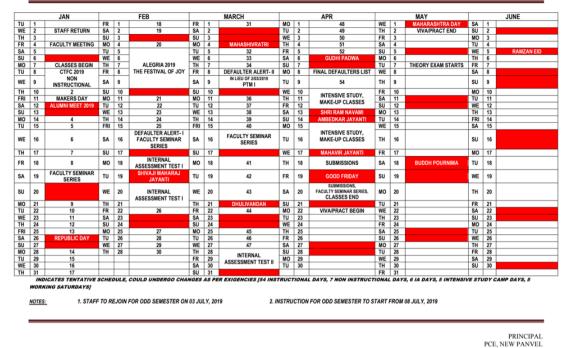
20. Number of full time teachers from other States against sanctioned posts:

| Year | | No. Of Full time Teachers | No. of teachers from other states |
|--------|---|---------------------------|-----------------------------------|
| 2018-1 | 9 | 18 | NIL |

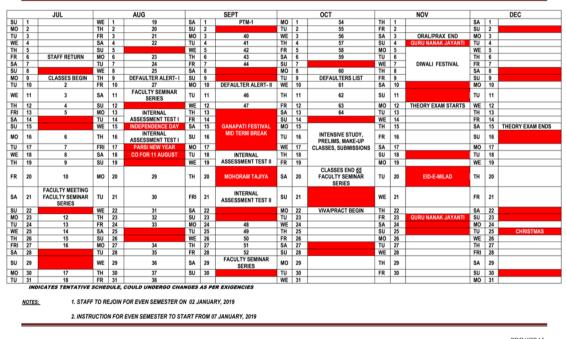
21. Details of examination related grievances received if any. **No grievances have been reported**

22. Adherence to the academic calendar:

PILLAI COLLEGE OF ENGINEERING, NEW PANVEL TENTATIVE TERM CALENDAR JAN-JUNE 2019(FOR FE, SE, TE & BE)

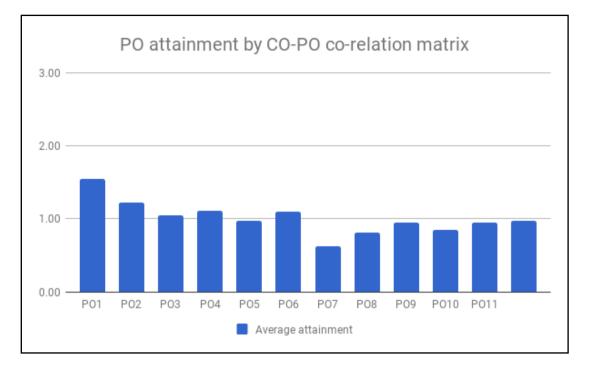


PILLAI COLLEGE OF ENGINEERING, NEW PANVEL TENTATIVE TERM CALENDAR JUL-DEC 2018 FOR SE, TE & BE

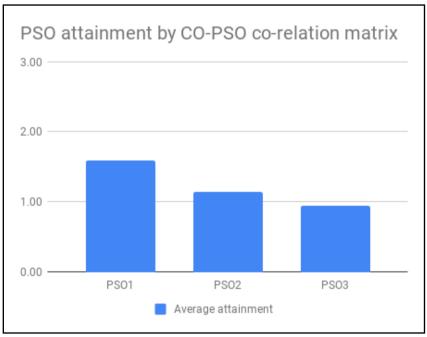


PRINCIPAL PCE, NEW PANVEL

The department follows the term calendar issued by Head of the Institute. Additional activities are planned and executed as and when required.



23. Attainment of Programme outcomes, Programme specific outcomes and course outcomes:



(Note:-The above graph shows direct attainment of POs and PSOs for LYG 2018-19)

24. Result Analysis:

| Program | Program Name | Level/Semest | Number of | Number of |
|---------|--------------------|--------------|-------------------|-----------------|
| Code | | er | students appeared | students passed |
| | | | in the exam | in the exam |
| EXTC | Electronics and | VIII | 133 | 99 |
| | Telecommunication. | | | |
| | | VII | 134 | 103 |
| EXTC | Electronics and | VI | 138 | 73 |
| | Telecommunication. | | | |
| | | V | 138 | 52 |
| EXTC | Electronics and | IV | 142 | 98 |
| | Telecommunication. | | | |
| | | III | 142 | 73 |

25. Total Grant received for research projects sponsored by the government and the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs

| SN | Name of the Project/ Endowments, Chairs | Name of the Principal Investigator | Departm ent of Principal Investigat or | Year of Award | provid | Duratio n of the project | Name of the Funding Agency | Type (Govern ment/non - Governm ent) | Relevan t Docume nt link |
|----|---|--|--|---------------------|--------------------|--------------------------------|-------------------------------------|---|--|
| 01 | A four band Notched Monopole antenna for bluetooth and Ultra wide band application | Dr. Avinash Vaidya | EXTC | 2018- 19 | Rs. 25000/ - | 01 YEAR | Mumbai University | Governme nt | https://dr ive.goog le.com/fi le/d/1fy7 BT5gOF UFo0vK Y- WwY9N norgTUs 1qr/view |

26. Details of the teachers recognized as research guides:

| SN | Name of teachers recognized as research guides | PG / PhD Recognition | Department | Year of Recognition |
|----|--|-------------------------|------------|------------------------|
| 01 | Dr. Avinash R. Vaidya | PG | ETRX | 2018 |
| 02 | Mr. Pragnesh Shah | PG | ETRX | 2012 |
| 03 | Ms. Jayashree Bhosale | PG | ETRX | 2012 |

27. Details of workshops/ seminars conducted on Intellectual Property Rights (IPR) and Industry- Academia Innovative practices:

| SN | Year | Name of the workshop/ seminar | Date From – To | Activity(IPR/Industry- AcademiaInnovative practices) |
|----|-------------|--------------------------------------|------------------------|--|
| 01 | | 3 Months Course on IPR and Patenting | Jan 2019 to April 2019 | IPR |
| 02 | 2018- 19 | Seminar on Intellectual Property | 7th Februrary 2018 | IPR |
| 03 | - / | 3 Months Course on IPR and Patenting | Jan 2018 to April 2018 | IPR |

28. Details of incentives to teachers who receive state, national and international recognition/ awards:

| Sr. No. | Name of the Awardee with contact details | Name of the Award | Name of the Awarding Agency |
|------------|--|---|---|
| 01 | Tusharika Banerjee | Bharat ShikshaRatan Award 2018-19 | Economic Growth Foundation "Individual Achievement Intellectual Excellence & National Development under National Achievers Recognition Forum" |
| 02 | Tusharika Banerjee | Asia Pacific International Educational Excellence Award, February 2019 | Achievers Association for health and Educational Growth at Indo-Thai Friendship Summit, Bangkok |

29. Details of research papers published by teachers in the Journals notified on UGC website:

| SN | Title of paper | Name of the author/s | Department of the teacher | Name of journal | Year of publication | ISBN/ISSN number | Link of the recognition in UGC enlistment of the Journal |
|----|--|-----------------------------|------------------------------|--------------------|---------------------|----------------------|--|
| 01 | Speech Recogniti on By Intelligent Surface | Ms. Suchitra A. Patil | EXTC | IJSART | 2018-19 | ISSN : 2395- 1052 | http://ijsart.com/Content /PDFDocuments/IJSAR TV4I724338.pdf |

30. Details of books and chapters in edited volumes/books published and papers in national/international conference:

| | Name of Teacher | Title of the book/cha pters published | Title of the paper | Title of the proceedings of the conference | Name of the confe rence | National / internatio nal | Year of publication | ISBN/ISSN number of the proceeding | Affiliating Institute at the time of publication | Name of the publish er | Relevant link |
|----|----------------------------|---|---|---|----------------------------------|---------------------------------|------------------------|---|---|---------------------------------|---|
| 01 | Mr. Yogesh Kene | | A Survey of Image Classification and Techniques for Improving Classification Performance | Proceedings 2019: Conference on Technologies for Future Cities (CTFC) | CTFC 2019 | INTERN ATIONA L | 2019 | ISBN 978- 93-82626- 27-5 | Pillai College of Engineering | PCE | https://pape rs.ssrn.com /sol3/paper s.cfm?abstr act_id=334 9696 |
| | Dr.Avinas hR. Vaidya | | Design and Testing of Dielectric Loaded High Gain Microstrip Antenna | Antenna Test & Measurement Society (ATMS- INDIA-19) | ATM S 2019 | INTERN ATIONA L | JULY 2019 | | Pillai College of Engineering | ATMS | Accepted Paper |

31. Details of the extension activities undertaken by the department in sensitizing students to social issues and holistic development:

| Sr. No | Program Details | | Number of Participated Students | Remarks |
|--------|----------------------------|----------------------|---------------------------------------|--------------------------------------|
| 01 | Women's Day Celebration | ETSA Student Council | AU Mildente | 30 Faculty Members also Participated |

| 02 | Anubhav | ETSA Student Council | 700 Nuidents | A talk by Final Year Students |
|-----|---------------------------|------------------------------|--------------|---|
| 103 | Community Service Day | ETSA Student Council and MES | 45 Students | 05 Faculty Members |
| 04 | National Calamity Fund | MES | 10 Students | Collection and Donation of different commodities to CM relief fund |

32. Total number of awards and recognition received for extension activities from Government/ recognized bodies:

| SN | Name of the activity | Name of the Award/ recognition | Name of the Awarding government/ recognised bodies | | Name of the Faculty | |
|----|----------------------|-----------------------------------|---|--|------------------------|--|
| | NA | | | | | |

33. Details of extension and outreached Programmes conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc.:

| SN | Name of the activity | Organising unit/ agency/ collaborating agency | Year of the activity | Number of teachers participated in such activities | Number of students participated in such activities |
|----|----------------------------|--|----------------------------|--|--|
| NA | | | | | |

34. Total number of Students participating in extension activities with Government Organization, Non-Government Organizations and Programmes such as Swachh Bharat, AIDs awareness, Gender issue etc.

| ŝ | SN | Name of the activity | Organising unit/ agency/ collaborating agency | Name of the scheme | the | Number of students participated in such activities | |
|---|----|----------------------|---|-----------------------|-----|--|--|
| | NA | | | | | | |

35. Details of linkages for faculty exchange, student exchange, internship, field trip, onthe- job training, research etc:

| N N | the | Name of the partnering institution/ industry /research lab with contact details | Year of commencement | Duration (From-To) | Nature of linkage |
|-----|------------|---|-------------------------|-----------------------|----------------------|
| 01 | Internship | BSNL Earth Station, Yeur | 2018-19 | 05 Days | Internship |
| 02 | Field Trip | DoordarshanSahayadri Kendra, Worli, Mumbai | 2018-19 | 01 Day | Field Trip |

36. Details of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc.:

| Sl. No. | Organisation with which MoU is signed | Name of the institution/ industry/ corporate house | Year of Signing MoU | Duration | List the actual activities under each MoU year wise | Number of students/teachers participated under MoUs |
|------------|--|---|---------------------------|----------|--|--|
| 01 | Frankilin Electric Grid Solutions, USA | | 2018-19 | 3 Yrs | Internships | 2 students |
| 02 | Access Telematics Systems | | 2018-19 | 3 Yrs | Internships | |

37. Details of departmental infrastructural & other facilities:

| a) Departmental Library (books, journals etc.) | : Yes |
|--|-------|
| c) Computers and Internet facilities for staff | : Yes |
| d) Total number of class rooms | :6 |
| e) Class rooms with ICT facility | : Yes |
| f) Students' laboratory | : Yes |
| g) Research laboratories | : Yes |
| h) Seminar Hall | : Yes |
| i) Smart class room | : Yes |
| j) Any other facility LCDs | : Yes |
| | |

38. Student – Computer ratio:

| Total Number of students | Number of computers for students in working condition | Student Computer Ratio |
|--------------------------|---|---------------------------|
| 501 | 116 | 4.3189 |

39. Details of e-content developed by the faculty in the department:

| Name of the e-content development facilities | Provide link to videos of the media centre and recording facility |
|--|---|
| | https://youtu.be/XLvN6o-0r3M |
| | https://youtu.be/Neg1Z7AdYLY |
| | https://youtu.be/voKb1JSc4Nw |
| Light-board for visually dynamic video | https://youtu.be/LCDcngH42r4 |
| lectures | https://youtu.be/tbNQSQEvftU |
| | https://youtu.be/98VH8CyIrnk |
| | https://youtu.be/hNb2LYH_PNQ |
| | |

40. Details of maintenance of laboratory and classrooms:

41. Number of students benefited by scholarships and freeships provided by the Government:

| Name of the scheme | Number of students benefited by government scheme (Scholarships) | Number of students benefited by government scheme(freeships) | State Minority Scholarship | Merit Cum- Means Scholarship |
|--------------------------|--|--|----------------------------------|------------------------------------|
| VJNT | 05 | | | |
| OBC | 41 | | | |
| SBC | 01 | | | |
| SC | 13 | | | |
| EBC | 117 | | | |

42. Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes:

| Name of the scheme with contact information | Number of students benefited by non- government schemes |
|---|--|
| FELICITATION OF TOPPERS | 6 |
| FINANCIAL HARDSHIP | 1 |
| ACADEMIC ADVANCE SCHEME | 82 |
| TOTAL STUDENTS BENEFITTED | 89 |

43. Number of students enrolled capability enhancement and development scheme:

| Name of the capability enhancement scheme | Year of | Number of students enrolled | Name of the agencies involved with contact details |
|--|---------|--------------------------------------|---|
| Guidance for competitive examinations | 2018-19 | | |
| Career Counselling | 2018-19 | 46 | SMEC Labs Mr Naveen Nair - Office no 209, 2nd Floor, Krishna Plaza, Opposite thane railway station ShivajiPath,Naikwadi,Thane West, Ghantali, Thane, Maharashtra 400602 Tel:088613 41460 |

| Soft skill development | 2018-19 | | |
|---------------------------|---------|-----|---|
| Remedial coaching | 2018-19 | 35 | Dr. Avinash R. Vaidya - avinashvaidya@mes.ac.in |
| Language lab | 2018-19 | | |
| | | 40 | IEEE Prof. Padmaja Bangde (IEEE,PCE) - pbangde@mes.ac.in |
| | 2018-19 | 46 | IEEE Prof. Padmaja Bangde (IEEE,PCE) - pbangde@mes.ac.in |
| | | 45 | IEEE Prof. Padmaja Bangde (IEEE,PCE) - pbangde@mes.ac.in |
| | | 32 | IEEE Prof. Padmaja Bangde (IEEE,PCE) - pbangde@mes.ac.in |
| | | 31 | IEEE Prof. Padmaja Bangde (IEEE,PCE) - pbangde@mes.ac.in |
| Bridge courses | | 60 | ESTA Prof.Apeksha S. Chavan (ESTA,PCE) - achavan@mes.ac.in |
| | | 80 | ESTA Prof.Apeksha S. Chavan (ESTA,PCE) - achavan@mes.ac.in |
| | | 50 | ESTA Prof.Apeksha S. Chavan (ESTA,PCE) - achavan@mes.ac.in |
| | | 110 | ESTA Prof.Apeksha S. Chavan (ESTA,PCE) - achavan@mes.ac.in |
| | | 170 | ESTA Prof.Apeksha S. Chavan (ESTA,PCE) - achavan@mes.ac.in |

| Yoga and Meditation | 2018-19 | |
|-------------------------|---------|--|
| Personal Counselling | 2018-19 | |

44. Number of students in the department benefitted by guidance for competitive examinations and career counseling offered by the institution:

| Year | Name of the scheme | Number of students benefited /attended/participated by career counseling/Competitive exam activities |
|------|--------------------|---|
| | | |
| | | |

45.Number of students attending Vocational Education and Training(VET)

| Number of students attending VET | Total number of students | | |
|----------------------------------|--------------------------|--|--|
| 121 | 445 | | |

46. Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee:

| U | U | Average time for grievance redressal in number of days | | |
|---|---|--|--|--|
| | | | | |

47. Number of outgoing students placed along with name of the employer with contact details:

| Number of students placed | Name of the employer with contact details | Package received | Program graduated from |
|---------------------------|--|---------------------|---------------------------|
| 1 | Aditya Birla Science and Technology Company Pvt.Ltd | 1.2L | EXTC |
| 1 | Imarticus Learning Pvt Ltd | 3L | EXTC |
| 2 | LTI Ballard Estate, Mumbai 67525656 | 3.18L | EXTC |
| 1 | NEXA | 1.2L | EXTC |
| 2 | Qspider, Andheri East , 7028350006 | 2.5L | EXTC |
| 1 | RelainceJio,Navi Mumbai | 3.29L | EXTC |
| 5 | Reliance Retail, Ghansoli,44775000 | 3.1L | EXTC |

| | Sutherland Global, Airoli, Navi Mumbai, Maharashtra 400708 022 4183 7884 | 2.5L | EXTC |
|---|--|-------|------|
| 2 | TCS, Thane West, 67782000, caree@tcs.com | 3.36L | EXTC |

48. Details of the students going for higher education:

| Number of students enrolling into higher education | Program graduated from | Department graduated from | Name of institution joined | Name of program admitted to | | |
|--|------------------------------|------------------------------|----------------------------------|-----------------------------------|--|--|
| NA | | | | | | |

49. Number of students appearing and qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations):

| Number of students selected/ qualifying | | | | | | | State | | |
|--|--------------------|--|--|--|--|--|---------------|---------------------------|--|
| Registration /Roll No for the exam | /Roll No for Civil | | | | | | | government examination | |
| 75421 | | | | | | | Siddhi Sankhe | | |

50. Number of awards/medals for outstanding performance in sports/cultural activities at national / international level:

| Name of the award/ medal | National/ International | Sports/ Cultural | Name of the Student | Number of students | Adhaar Number/Admission Number |
|---|----------------------------|---------------------|------------------------|--------------------|--------------------------------------|
| Qualifier Team In College Level Football Competition Organised By Reliance Foundation | National | Sports | Kushal Surarna | 01 | 2016PE0391 |

51. Details of the student council and the departmental student chapters:

| Sr. No | Departmental Student Chapter | Number of Students |
|--------|-------------------------------------|--------------------|
| 01 | Student Council | 2 |
| 02 | IEEE | 5 |
| 03 | ETSA | 16 |

52. Number of sports and cultural activities/competitions organized at the institution level:

| Sr. No. | Name of the activity | Event Date |
|---------|----------------------------|------------|
| | Alegria 2019 | 5th to 9th |
| 1 | FIFA 19 (PS4) | FEB |
| 2 | NFS Most Wanted | |
| 3 | CS GO | |
| 4 | DOTA 2 | |
| 5 | PUBG | |
| 6 | Mini Militia | |
| 7 | Ludo King | |
| 8 | Oculus VR Fruit Ninja | |
| 9 | Oculus VR Fruit Ninja spot | |
| 10 | Marathon (Pre-Alegria) | |
| 11 | Futsal | |
| 12 | Box Cricket | |
| 13 | Basketball | |
| 14 | Volleyball | |
| 15 | Kabaddi | |
| 16 | Tug of War | |
| 17 | 10m Air Rifle Shooting | |
| 18 | Badminton (Girls) | |
| 19 | Badminton (Boys) | |
| 20 | Shotput | |
| 21 | Chess | |
| 22 | Table Tennis | |
| 23 | Carrom (Single) | |
| 24 | Carrom (Double) | |
| 25 | Football and cricket Quiz | |

| 26 | Devils Circuit | |
|----|----------------------|--|
| 27 | Neo Cricket | |
| 28 | Neo shootout | |
| 29 | Neo Basketball | |
| 30 | Free Style Solo | |
| 31 | Classical Solo | |
| 32 | Solo Singing | |
| 33 | Rapping | |
| 34 | Beat Boxing | |
| 35 | Stand Up Comedy | |
| 36 | Mono Acting | |
| 37 | Open Mic | |
| 38 | Instrumental Music | |
| 39 | War Of DJs | |
| 40 | Duet Dance | |
| 41 | Folk Group | |
| 42 | Free Style Group | |
| 43 | Skit | |
| 44 | The Face Of Alegria | |
| 45 | Mr & Ms Alegria | |
| 46 | Fitness Physique | |
| 47 | Fashion Show | |
| 48 | Treasure Hunt | |
| 49 | Photography | |
| 50 | Fastest Finger First | |
| 51 | PTV Rowdies | |
| 52 | Food-a-thon | |
| 53 | Rose day | |

| 54 | Farewell | |
|----|--|-----------------------------|
| 55 | Garba night | |
| 56 | Saree day | |
| 57 | Traditional day | |
| 58 | Shivaji Jayanti | |
| 59 | Aarambh | |
| 60 | Engineering Football League 2019 | 25 Feb to 7 Mar 2019 |
| 61 | Mumbai University Volleyball Championship | 10Dec to 13 Dec 2018 |
| 62 | FE SPORTS | 25 SEP to 28 SEP 2018 |

53. Details of the contributions of alumni in the development of the department/ institution through financial and non financial means:

| Sr. No | Date | Title | Speaker | Attendee s | Duration |
|-----------|--|---|--------------------------|---------------|----------|
| 1 | 23-24 Feb 2019 and 10th March 2019 | " FLASK: Python web framework" | Dhiraj Amin | 35 | 3 Days |
| 2 | 27th Feb 2019 | Seminar on " Software engineering and project management " for TE IT students by Shivkumar | Shivkumar Vishwakarma | 28 | 1 Day |
| 3 | 8th March 2019 | Women's Day Celebration | Apeksha Chavan | 30 | 1 Day |
| 4 | 15th and 16th March 2019 | " Internet of Things " | Mimi Cherian | | 2 Days |
| 5 | 22nd February, 2019 | " Internet of Things " | RuchiraPatole | 41 | 1 Day |
| 6 | 2nd March 2019 | Web Development | Akhil Menon | | 1 Day |
| 7 | 4th Nov 2018 | Flask Python Web Framework | Dhiraj Amin | 33 | 1 Day |
| 8 | 2nd October 2018 | Basic Concepts of Python | Dhiraj Amin | 100+ | 1 Day |

| 9 | 2nd and 9th August 2018 | LaTeX workshop | Ms. RuchiraPatole | 42+34 | 2 Day |
|----|----------------------------|-----------------|--|-------|-------|
| 10 | 4th September 2018 | Arduino | Ms. AboliKhedkar | 82 | 1 Day |
| 11 | 29 September 2018 | Web Development | Mr. Akhil Menon and Mr. Vishnu Nair. | 29 | 1 Day |

54. Details of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies:

| <u>Sr.No</u> | Name of teacher | PAN | Name of conference/ workshop attended for which financial support provided | Name of the professional body for which membership fee is provided | Amount of support(RE MARK) |
|--------------|----------------------------------|------------|---|--|----------------------------------|
| 1 | Dr. Avinash R. Vaidya | AGQPV0116N | ATMS 2019, Chennai | | 10,000/- |
| 2 | Yogesh Kene | BOTPK3322K | NA | Indian Society of Remote Sensing (Life Membership) | 3,500/- |
| 3 | Dr. Avinash R. Vaidya | AGQPV0116N | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 4 | Pragnesh Shah | | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 5 | Jayashri Bhosale | AIDPB9946K | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 6 | Ms. Tusharika Banerjee | BZMPS5559N | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 7 | Liril C George | ASZPC0977H | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 8 | Sweta Waghmare | ABNPW1874A | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 9 | Ms. Simon Florence Francis | GIGPS7755L | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |
| 10 | Dinesh Tiwari | AIKPT9882H | Conference on Technologies for Future cities 2019(CTFC- 2019) | | 500 |

| 11 | Yogesh V Kene | BOTPK3322K | Conference on Technologies for Future cities 2019(CTFC- 2019) | 500 | |
|----|----------------------------------|------------|--|-----|--|
| 12 | Harsha Sharma | CCHPS2836P | Conference on Technologies for Future cities 2019(CTFC- 2019) | 500 | |
| 13 | Ms. Manisha Singh | DPCPS5350M | Conference on Technologies for Future cities 2019(CTFC- 2019) | 500 | |
| 14 | Ms. Pratiksha Patil | | Conference on Technologies for Future cities 2019(CTFC- 2019) | 500 | |
| 15 | Dr. Avinash R. Vaidya | AGQPV0116N | Conference on Polymer Processing | 150 | |
| 16 | Ms. Simon Florence Francis | GIGPS7755L | Conference on Polymer Processing | 150 | |
| 17 | Ms. Simon Florence Francis | GIGPS7755L | Mumbai Area Complex Systems Conference 2018on 19th November 2018 | 100 | |
| 18 | Ms. Manisha Singh | DPCPS5350M | Mumbai Area Complex Systems Conference 2018on 19th November 2018 | 100 | |
| 19 | Ms. Tusharika Banerjee | BZMPS5559N | Mumbai Area Complex Systems Conference 2018on 19th November 2018 | 100 | |
| 20 | Ishmeet Singh | BZIPR4053A | Mumbai Area Complex Systems Conference 2018on 19th November 2018 | 100 | |

55. Number of professional development/administrative training programs organized by the department for teaching and non teaching staff:

| S1. No | Title of the professional development program organised for teaching staff | Title of the administrative training program organised for non- teaching staff | Dates (from-to) | Dates (from-to) Nonteac hing | No of participants (Teaching staff) | No of participants (Nonteaching staff) |
|-----------|--|--|----------------------|---------------------------------------|--|---|
| 01 | STTP on MIS | | 01 – 05 July 2019 | | 42 | |
| 02 | Workshop on LaTeX | | 01 Sept 2018 | | 08 | |

56. Details of teachers attending professional development Programmes viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes:

| Number of teachers who attended | Title of the professional development program | Date and Duration (from – to) |
|---------------------------------------|---|---------------------------------------|
| 7 | Conference on "Polymer Processing"organized by PCE New Panvel | 23rd Feb 2019 |
| 17 | Conference on Technologies for future cities 2019(CTFC-2019) | 8.01.2019 & 9.01.2019 |
| 8 | Workshop on LaTeX at PCE | 1st Sept 2018 |
| 1 | NPTEL online certification course on, "Developing Soft Skills and Personality". | Aug-Oct 2018 (8 week course) |
| 1 | Orientation Program for Digital communication at Vidyalankar college | 6 July 2018 |
| 7 | Attended one day workshop at PCE, New panvel on Moodle on 15 March 2019 conducted by MHRDIITB | 15 March 2019 |
| 3 | NPTEL course on "Introduction to Research" | Jan- April 2019 |
| 2 | Advanced Topics in Embedded Systems and Robotics" organised by IIT, Bombay. (STTP) | 27 August 2018 to 31st August 2018 |
| 1 | Industry Institute Interaction Meet, PCE(seminar) | 18.05.18 |
| 1 | Orientation Program for "CTN" at A.P.Shah College , Thane | 10.01.19 |
| 1 | Orientation Program for "Design with Linear Integrated circuits" at Fr. CRCE, Bandra on 12/07/2018 | 12/07/2018 |
| 1 | Orientation Program for "MCA" | Jan 2019 |
| 1 | Orientation Program for "Microprocessor and Peripherals Interfacing" at A.P.Shah Institute of Technology,Thane | 18th July,2018 |
| 1 | NPTEL course on "Signals and system" | Jan-April 2019(12 weeks) |
| 1 | IOT Fundamental conducted by Cisco Networking Academy(STTP) | 21 Aril 2019-27 April 2019 |

57. Total Grants received from non-government bodies, individuals, Philanthropers:

| Name of the non government funding agencies/ individuals | Funds/ Grants received in Rs. | Initiative |
|---|-------------------------------|------------|
| Cisco Academy Support Center | 20200 | |

58. Details of quality enhancement initiatives in the academic and administrative domains of the department:

1. Academic Audit Committee: Teaching learning process is continuously reviewed through regular and in-depth manual as well as online academic audit also the AAC reviews the preparedness of every department for NBA.

(a) The following are the some of the measures initiated by department through IQAC to review the teaching learningoutcomes:

1.Adherence to Academic calendar.

2.Regular and proper class conduction

3.Regular conduction of internal assessment with timely evaluation and intimation to students and parents through PTM.

4.Regular up gradation of study materials, assignments, tutorial questions, course contents and laboratory manuals.

5.Regular collection of feedback from the students (for teachers and curriculum), analysis and appropriate action taken on the basis of the feedbacks.

6. Computation of levels for Course attainment and Programme attainment.

7. Regular performance appraisal of the faculty members and technical staff.

8. Periodic review of the attainment of the various COs, PSOs and POs to ensure proper quality.

(b) Online monitoring System: Online Monitoring System is a cumulative term for different online portals being designed in-house to cater to the needs of PCE. The system provides data storage and monitoring of both student as well as faculty at PCE. Digital data helps in good organization, transparency and efficient tracking of students. This helps in taking timely disciplinary action against defaulting students. The system also provides solution to manual distribution of hall tickets and railway Concession form, thereby saving time and resource.Faculty portal helps to monitor performance of faculty which helps in assessment during appraisals.

The challenging issues for different needs are addressed by various software tools designed and developed atPCE which include.

AMS(Attendance Monitoring System): Used for updating student attendance record, report generation, lecture planning and viewing student feedback.

Student Portal: Used for admission, Exam form filling, individual results,

Faculty Portal: Faculty Portal helps to effectively monitor the development of PCE faculty based on his/ her contribution in terms research publications, paper assessment details, roles and responsibilities during an academic year.

Online Feedback and Course Exit Survey: PCE in its efforts to provide best quality education to its students have highly skilled faculty. However student feedback of teachers is equally important to understand if the students are maintaining correct pace with the teachers or the concerned teachers need to make adjustment/correction according to needs of the students.

MMP portal: In mentor mentee portal, all the mentors and mentees can log in through their mes mail id. All the mentees have to fill and update the mentee registration form every semester. This portal has all the data of mentors as well as mentees.

2. Enhancement of quality:

i. The faculty are encouraged to attend various workshops and seminars to upgrade their skills.

ii. The faculty are sponsored for pursuing Ph.D to upgrade the qualification.

iii.The faculty and students are encouraged to take up NPTEL and MOOC courses to upgrade their knowledge.

| Year | Sr. No. | Title of the program | Date and Duration (from-to) | Number of participants |
|---------|------------|---|--------------------------------|---------------------------|
| 2018-19 | 01 | MOU for Development Program for girls | 2019 | |
| | 02 | International Women's Day | 6th March 2019 | 45 |
| | 03 | Building Resilience - A key to Women Empowerment | 6th March 2019 | 53 |
| | 04 | Hackathon (Odd sem) | 2018-19 | 06 |
| | 05 | Hackathon | 2018-19 | 03 |
| | 06 | Girls in Tech | 2018-19 | 03 |

59. Number of gender equity promotion Programmes organized by the department:

60. Details of the PBL topics floated by the department:

| Sr No | Class | Topic Floated | | |
|-------|-------------|---|--|--|
| 01 | Second Year | Smart Mirror | | |
| | | Smart Garbage Bin | | |
| | | Coin / Colour Sorter | | |
| | | IC Tester | | |
| | | Design a multimeter using Arduino | | |
| | | Energy Harvesting using Piezoelectric sensors | | |
| | | Design of IR sensor based counter using Arduino | | |
| | | Digital Dice to Display Two dice | | |
| | | Fastest Finger First | | |
| | | Design a multimeter using Arduino | | |
| 02 | Third Year | Smart Watch | | |
| | | Smart Calculator | | |

61. Details of the final year project:

| Sr No | Project Title | Group Members | Guide | Industry Concerned | Outcome/ Benefit |
|-------|---|--|-----------------|-----------------------|---------------------------------|
| 1 | Mathematical Modelling Of RF Wave Propagation Models In VHF/UHF Band. | De SukanyaSwapankuma r Nath SabyasachiSada Nanda Kaydalwar Sumeet Mukesh | Suman Wadkar | BARC | Exposure to Industrial needs |

| Sr No | Project Title | Group Members | Guide | Industry Concerned |
|-------|-------------------------------------|----------------|-----------------------------|-----------------------|
| 1 | Design of High Speed Adder using | Bhatuse Akash | Mrs. Padmaja Bangde/ Mr. | |
| | VHDL | Shruti Pingale | Ishmeet Singh Riar | |

| | | Abhinav verma | |
|---|--------------------------------------|------------------------------|------------------------|
| | | Avinashkumar Mishra | |
| 2 | Automatic Smart | Nair Aishvarya Narayanan | Mrs.Sonali Kathare |
| | Parking System using Internet of | Nair Shreya Sunil | |
| | Things | Nambiar Sarang A Gokuldas | |
| | | Nambiar Sidharth Rajagopalan | |
| 3 | Smart Traffic | Alekh Satheesh Kumar | Mr.Ajit Saraf/ |
| | Control based on Video Images | Bhole Shweta Sanjay | - Mr.Yogesh Kene |
| | | Chavan Siddhesh Mahadeo | |
| | | Ghadage Manoj Atmaram | |
| | | Nath Sabyasachi Sada Nanda | |
| | | Kaydalwar Sumeet Mukesh | |
| 4 | Crop Disease detection using | Bangera Shobna Shamsunder | Mrs.Suchitra Patil |
| 4 | image processing / Opency and | Channapnor Umesh Rajendra | |
| | Rasberry Pi | Dash Anushree Satynarayan | |
| | | Jadhav SupriyaUmaji | |
| 5 | IOT Irrigation Monitoring & | Jaiswar Abhishek Dharmraj | Mrs.Sweta Waghamare |
| 5 | Controller System | Khairnar Shubham Walmik | wagnamare |
| | | KoliDhawal Ravindra | |
| | | Mishra ShivamRamsagar | |
| 6 | Speech Detector Robotic Vehicle | Gupta Ashish Kanhaiyalal | Mr.Ujwal Harode |
| 0 | Control | Lobo Jenivia Alex | |
| | | M.S Sriya Mohan | |
| | | Nadar Suryaraja Jawaharlal | |
| 7 | Raspberry Pi and GSM based | Dubey Keerti Mahendra | Mrs.Rubina Shaikh |
| / | automatic driver drowsiness alert | KharcheSumitSuhas | |
| | system:- | KaseraVikas Rakesh | |
| | | Mundhe Pooja Subhash | |
| | Wireless Library | Bait Aniket Pravin | Mrs.Sonali Kathare |

| 8 | Book Catalogue | Bhosale Aakash Ramesh | |
|-----|---|-------------------------------------|----------------------|
| | System. | Bobade Pankaj Kalidas | |
| | | Dingankar Omkar Mahesh | |
| | Safety Electronics | GhorpadeTejas Ananda | Ms.Meera Kharat |
| | for Railway Bridge | Jaiswal Arunkumar Bhanupratap | |
| | | KakdeDattatryDilip | |
| 9 | Arduino based | Borkar Mandar Rajendra | |
| 10 | Mind-Controlled Robot using EEG Signal. | Dabharwala Abdul Qadir Saifuddin | - Mrs.Rubina Shaikh |
| | | Daki Darshan Mahendra | |
| | | Karkera Sachin Devdas | |
| 1.1 | Heart beat rate | Lokare Mayur Raghunath | Mrs. Sneha Chikodi/ |
| 11 | measurement using fingertip. | Madhavi Saurabh Sunil | - Mrs. Aboli Khedkar |
| | | MalviRupal Surendra | |
| | | Nair Adarsh Mohan | |
| 10 | Internet of Things | A NavinSatheeshan | Ms.Meera Kharat |
| 12 | Based Intelligent Street Lighting | Admuthe Yash Sachin | |
| | System for Smart City | Gade Aarti Vithal | |
| | | Gangan Siddhi Sunil | |
| 10 | Weather based | Choudhary Jitendra Mangilal | Mrs.Swati Patil |
| 13 | smart home solar power | Godase Vaibhav Vasant | |
| | management with IOT | Jadhav Akshay Sanjay | |
| | | Jagtap Mayur Sambhaji | |
| 14 | Development of Smart Bike Helmet | Gaonkar Pradnya Ramchandra | Mrs. Deepti Nair |
| 14 | using RF, GSM and GPS Modules. | Jadhav Mahesh Somanath | |
| | and Gr5 Modules. | KatkarMinal Dattatray | |
| | | Khan Ziyaur-Rehman Moiz | |
| 15 | Anti theft security | Parkar Saifallah Liyakat | Mr.Ajit Saraf |
| | system for electronic equipments using | Shaikh Mohammad Sohaib | |

| | MEMS sensor and zigbee based on MSP430/ARM/PI C. | | | |
|----|---|-----------------------------|---|--|
| 16 | Design of a colour | Kadam Pratiksha Ravindra | Mrs.Sonali Kathare | |
| 16 | sensing system for Textile Industries | Kamble Supriya Madhavrao | | |
| | | Chavan Shivani Shrimant | | |
| | | Pratima Kamble | | |
| | Car to Car Communication | Junghare Rohan | Mr.Anup Vanage | |
| | based on GPS and WI-FI | Gaurav Mandhare | | |
| | W I-F1 | JayendraPingale | | |
| 17 | Raspberry Pi based | Patil Satej Surendra | Mr. Ameet Mehta / Mrs. Aboli Khedkar | |
| | electronic voting machine. | Salati Awaij Shakil | Mrs. Adon Knedkar | |
| | | Samant Parth Sakharam | | |
| | | Shetty Sindhoora Prabhakar | | |
| 10 | IOT based Smart | Parande Ankita Pramod | Mrs.Deepti Nair | |
| 18 | Restaurant Management | Paras Yagyesha Sanjay |] | |
| | System. | Patel Bhakti Kanti | | |
| | | Shirodkar Akshay Deepak | | |
| 10 | Smart waste | Sen Himanshu Sunil | Mrs. Apeksha Chavan | |
| 19 | management system based on | Singh Vipulkumar Sunil | Chavan | |
| | IOT (Using Rasberry Pi) | Yadav Sandesh Subhash | | |
| | | Yerra Dilipkumar Chandrarao | | |
| 20 | Multipurpose Rolling Display | Patil Ankita Mohan | Mr. Ajit Saraf | |
| 20 | and Voice announcement | Patil Nikita Popat | | |
| | system for the | Patil Prachi Babasaheb | | |
| | Institutes using ARM cortex M3/MSP 430. | Patil Snehal Vilas | | |
| 21 | Smart Helmet | Dayanand Juwatkar | Mrs. Suchitra Patil/ | |
| 21 | using small non- invasive display | Yogesh Dandekar | – Mrs. Harsha Sharma | |
| | combined with a speech recognition | Pratik Parikh |] | |

| | system | Mahima Sankar Mitra | |
|----|---|---------------------------|-----------------------------------|
| | Intensity controlled | Snehal Padekar | Mrs. Apeksha |
| 22 | Solar street lights (based on its | Gaurav Patil | — Chavan |
| | operation like in peak hours) | Prashant Patil | |
| | | Shivani Pawar | |
| | Zigbee Based | Thali Apeksha Gopinath | Dr. S. K. Srivastava |
| 23 | Room Temperature Controller | Waydande Supriya Khandu | |
| | | Yadav Shweta Pralhad | |
| | | Pandey Sneha Bhuwan | |
| 24 | Real-Time Air | Shetty Divya Shridhar | Mrs. Monika |
| | Quality monitoring system. | Shinde Pradnya Jaysing | Bhagwat/ Mrs. Aboli Khedkar |
| | | Shivalkar Palak Prashant | |
| | | Sneha Suresh | |
| 25 | Fingerprint based | Prasannan Venkatesh | Dr. R. H. Khade |
| | biometric voting machine using | Bhangale Abhijeet | |
| | Raspberry PI | Nahare Sagar | |
| | | Chitte Utkarsh | |
| 26 | Energy | Pardeshi Shubham Rajendra | Dr. S.K. Srivastava |
| | Management System With Programmable | Patel Ankit Dinesh | |
| | Numbers using GSM | Patil Aishwarya Sanjay | |
| | USIVI | Nair Sooraj N | |
| 27 | Intelligent Blinker to improve | Rishi Kumar Anil | Mrs. Sweta Waghamare/ Mrs. |
| | visibility at night | Salvi Yash Manohar | Harsha Sharma |
| | | Sankhe Siddhi Deepak | |
| | | Manjunath Hulkoti | |
| 28 | Face Recognition | Ruskin Joel Manoharan | Mrs. Padmaja Bangde/ Mrs.Aboli |
| | attendance system using Machine Learning. | Sherifani Simran Amit | Khedkar |
| | | Shinde Swapnil Prakash | |
| | | Singh Akash Bharatraj | |

| 29 | Trendy Home or Energy | Patil Priyanka Gajanan | Mrs.Tusharika Banerjee |
|----|--|-----------------------------|--|
| | management system | Potare Apeksha Subhash | Duileijee |
| | system | Deshmukh Pooja Sanjay | |
| 30 | Green Campus with internet of | Patil Rushikesh Rohidas | Mrs.Monika Bhagwat |
| | things | Rane Vaibhav Shyam | |
| | | Shaikh Sarique Tarique | |
| | | ShelarPraful Ananda | |
| 31 | Aqua Robot | Sable Akshata Anil | Mrs.Jayshree Bhosale |
| | | Sawant Santosh Ashok | |
| | | Sayyed Azhar Altaf | |
| | | Singh Ritu Vinod | |
| 32 | IOT Paralysis Patient Health | Swamy Vignesh Suresh | Dr.S.K. Srivastava |
| | Care Project | Upadhyay Ankit Ashok | |
| | | Yadav Ajay Virendra | |
| | | Upadhyay Jigar Vakil Prasad | |
| 33 | Electronic Writing Machine | Uttekar Akshay Laxman | Mr.Jayshree Bhosale |
| | Machine | Wakodikar Yash Dilip | |
| | | Yadav Nikhil Anil | |
| | | ZingrutRutuja Gajanan | |
| 34 | Food Safety | Peddeli Pranali Prabhakar | Mr. Ameet Mehta/ Mrs. Harsha Sharma |
| | Device in real time from a smartphone | PriyaVerma | WIS. Harsna Sharma |
| | application. | Thombare Nutan Sanjay | |

62. Initiatives taken by the department to enhance quality of teaching learning process, research and entrepreneurship:

Innovation and creativity are fundamental and essential qualities the the EXTC department seeks to develop both in its students andfaculty. It does this by creating an environment of opportunities around them and then allows them the freedom to be creative and innovative. Some of the initiatives for innovative and improved teaching learning are listed below.

PCE has a dedicated recording room called as "E-Learning Studio". An in-house developed Light Board a recording facility in this E-learning studio is part chalkboard and part projection screen that floats course content in space between the instructor and their student audience. Many faculty members have recorded the lectures respective subjects in stipulated time of 10 minutes each in our studio. Once edited, these videos are shared with students via YouTube or other learning platforms.

These online lectures allow the faculty to more easily incorporate interactive, audio-visual tools, digital resources, animation and simulations in their lectures. This allows students to

review lectures and various concepts at home and then come to class and ask questions. It also allows for faculty to cover material not in the syllabus but is still relevant to industry.

1. PCE is a recognised Remote Center of eOutreach program of IIT Bombay since 2012. Till date more than 30 faculty development workshops encompassing variety of subjects including use of ICT in education have been conducted through the remote center. These courses have enriched the EXTC department faculty members with advanced teaching methods adopted by eminent teachers/professors of various IITs.

2. Google Classroom and moodle is being used by a few of our faculty members and assignments/quizzes are given out through such classrooms.

3. Effective implementation of Problem/project based learning, demo models, mini projects in addition to seminars and case studies contribute in enhancing further creativity and innovation in teaching-learning.

4. Component library is a unique facility of teaching learning process in the EXTC department. Faculty members and students borrow different components to create/demonstrate/experiment different concepts, systems or subsystems that they learn in the theory classes and beyond syllabus.

5. Skill based learning is facilitated with additional certificate courses, workshops and trainings which helps in improving their employability. Such courses and workshops are conducted after the normal working hours and mostly on weekends or in vacations.

6. Field visits and Industrial visits to various software/hardware/Electronics/ Communication companies, Power Plants, Process plants, Showrooms and service centres in and around Mumbai help students in understanding beyondsyllabus concepts and latest trends in industry.

7. Facilitating students for various Project Competitions is integral part of our college culture. Students regularly participate in project competitions like all India level Hackathons, project Deep Blueetc.

Students are also encouraged to present technical papers in reputed conferences as well as competitions. The department also conducts project competition and cash awards are given to the best performing teams.

Declaration by the Head of the Department/Institution:

I am aware that the above information provided by the department will be validated by the AAA committee during the visit.

Dr. Avinash R. Vaidya Head of Department

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