

Compliance status – PART D

| S. No. | CRITERIA | OBSERVATIONS MADE BY NBA TEAM (DURING THE LAST ACCREDITATION VISIT) | COMPLIANCE STATUS (ACTION TAKEN BY INSTITUTION) |
|------------|--|--|---|
| 1 | Vision, Mission and Programme Educational Objectives | | |
| 1.1 | Mission and Vision | | |
| | 1.1.2 Publishing and Dissemination of Vision and Mission statements (C) | Partial Dissemination | Mission and Vision are disseminated at University Website. www.juit.ac.in Department page on website. http://www.juit.ac.in/department-of-electronics-and-communication Entrance of the Department All ECE Department laboratories. Appendix II |
| | 1.1.3 Process for defining Vision and Mission of the department (C) | Inputs from some stakeholders are not sought | Inputs from following stakeholders are sought <ul style="list-style-type: none"> • Feedback from Alumni • Feedback from Parents • Feedback from Peers Appendix III |
| 1.2 | Programme Educational Objective | | |
| | 1.2.2 Publishing and Dissemination of PEOs (C) | Partial Dissemination | Please refer to reply of 1.1.2 for dissemination of PEOs. |

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| 1.4 | Assessment of attainment of Programme Educational Objectives | | |
| | 1.4.2 Evidences for the attainment of the PEOs (C) | No evidence of feedback from employers. | <p>Inputs from employers are being sought by some of our employers as</p> <ul style="list-style-type: none"> • TT Consultants • HP • Cognizant • Accenture • Ericsson <p>Informal feedback is received by our employers who are regularly employing our students.</p> <p>Feedback forms for our employers is given in</p> <p style="text-align: center;">Appendix IV</p> |
| 1.5 | Results of assessment of achievement of PEOs used for redefining PEOs. (C) | No evidence for revision. | <p>A framework has been designed and a process has been initiated for assessing the attainment of PEOs.</p> <p>A program evaluation committee has been formed in the department to assess the attainment of PEOs and its proceedings are forwarded to BoS for further perusal.</p> <p style="text-align: center;">Appendix V</p> |

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| 2 | Programme Outcomes | | |
| 2.4 | Use of assessment results towards improvement of programme | | |
| | 2.4.1 Results of assessment of POs used for curricular improvements (C) | No evidence | <ul style="list-style-type: none"> • COs and POs mapping for every exam and internal assessment is done and evaluated. • Initiative has been taken by sending feedback forms to parents, alumni and industrial personnel to incorporate the changes. • Exit survey is a regular feature of department and IQAC of University. • Restructuring of scheme of B.Tech with 165 credits has been approved in Academic council, where changes will be done in compliance to these feedbacks. <p>CO- PO-PSO mapping Appendix VI</p> <p>Revision of syllabus of many courses enlisted in Appendix VI (a).</p> <p>New electives are floated listed in Appendix VI (b).</p> |
| | 2.4.2 Results of assessment of POs used for improvement of course delivery and assessment (C) | Not evident | <p>After assessing the correlation between COs of every subject and POs, modification in course delivery and assessment techniques have been brought by</p> <ul style="list-style-type: none"> • Modifying course delivery methods, • Providing NPTEL lectures • Providing Virtual labs platform • Giving minor projects for some subjects and labs • Extra classes for weak students <p>Refer to Appendix VII</p> |

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| 3 | Programme Curriculum | | |
| 3.1 | Curriculum | | |
| | 3.1.3 Justification for the programme curriculum satisfying the programme specific criteria (C) | Programme specific criterion is not listed. | <p style="text-align: center;"><u>PROGRAM SPECIFIC CRITERION</u></p> <p>Electronics and Communication Engineering is concerned with analysis and design of modern electronic systems, devices and signals for a broad range of applications such as wireless or network communication, electrical power and control and multimedia information technology.</p> <p>The program requires that the graduates of the program not only have a sound basis in the fundamental principles but also have the capacity to learn and assimilate novel advances as soon as they materialize.</p> <p>The program shall provide every graduate with adequate learning experiences to develop effective written and oral communication skills.</p> <p>These qualities are anticipated in the curriculum, which includes not only a sound theoretical background but also offers a variety of courses that develop the student's ability to gain knowledge autonomously and to combine it with contemporary design techniques.</p> <ul style="list-style-type: none"> • Revised curriculum of B. Tech course of 165 credits has been approved. • Moving towards CBCS system by including open electives and Minor project in III year from 2017 batch. <p>http://www.juit.ac.in/department/Electronics/B.Tech%20Curriculum%20Session%202017.pdf</p> |

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| | | No subject in RF/ Microwaves | <p>Electromagnetic Engineering as a core subject is included in the curriculum; four elective subjects in the related field are floated which broadly cover the entire contents of this field.</p> <p style="text-align: right;">Antenna Theory and Design</p> <hr/> <p>15B1WEC732 RF and Microwave</p> <hr/> <p>14B1WEC831 Microwave Compon Devices</p> <hr/> <p>13B1WEC832 Modern Antennas</p> <hr/> <p>12M1WEC231 Antenna and Radio W Propagation</p> <hr/> <p>The semester-wise list of electives offered is provided on http://www.juit.ac.in/electronics-and-communication-programmes</p> |
| 3.3 | Core engineering courses and their relevance to Programme Outcomes including design experience (C) | No articulation. Only mapping to POs. | <p>The curriculum is designed keeping PEO s and POs of the degree program as the basis. Starting from basic sciences, moving to engineering fundamentals and reaching the advance courses is the framework of the curriculum. Besides imparting the basics of the engineering and developing a strong base, the in depth knowledge of every subject is imparted to them.The curriculum comprises many advance courses as electives, state of art subjects and based on the demand of industry.</p> <p>1. Mathematics and Basic Sciences</p> <p>The Courses under this component covers topics such as ordinary and partial differential equations, differential Vector Calculus, Fourier series and transforms, Numerical methods, Probability and Random Processes and many more for solving engineering problems. It also covers fundamental physics, Nano-</p> |

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| | | | <p>science and technology & applications to integrate the research and innovative teaching.</p> <p>2. Basic Engineering Courses</p> <p>Basic Electronics Devices and Circuits, Signal and Systems, Analogue and Digital communication, Digital Electronics, Electromagnetic Engineering and many more engineering subjects that build the students' ability to analyze real life problems, design and provide appropriate solutions which enhance excellence in professional career.</p> <p>3. Humanities & Social Sciences (HSS)</p> <p>The focus is on the courses related to Communication Skills, Values & Ethics, Environmental Science, Economics, Financial Management, TQM, Project Management etc. The awareness of these courses, make the student communicate effectively and work in teams maintaining professionalism and ethical attitude.</p> <p>4. Professional Core</p> <p>As per the program specific criteria, the core courses cover the all topics envisaged by professional bodies. The scheme developed for the programme and the curriculum laid down for every subject is designed in a way to achieve academic excellence and meet the requirements of stakeholders and all-in-all move towards the attainment of department as well as University Mission.</p> <p>5. Departmental Electives</p> <p>The advanced courses such as Advanced Communication Systems, Intelligent</p> |
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| | | | Control Systems, Cognitive Radio, Soft Computing etc. are build on the fundamental course work to provide in-depth are included in this component which are appended as per the requirements. |
| 3.4 | Industry interaction/ Internship | Only internship. | <ul style="list-style-type: none"> • An expert from industry is included as BoS member for regular and constant involvement. • Department has arranged an industrial visit to Purple Intellect and one visit is scheduled for this semester, • Department of Industries, Solan, HP are actively involved for project evaluation, assessment of our students. • Interaction of experts from industry with students is arranged in form of expert lectures and workshops. <p>Appendix VIII</p> |
| 3.5 | Curriculum Development | | |
| | 3.5.2 Illustration of the measures and processes used to improve courses and curriculum (C) | Not evident | <ul style="list-style-type: none"> • The feedback and suggestion from the alumni and the outgoing class are incorporated in improving the curriculum. • All the faculty members contribute in the curriculum development by giving their inputs on various courses they are teaching to IQAC. • The curriculum improvement, modifications and additions are governed by BoS and executed through Academic council on a continuous basis.(Academic council 2016-17 and 2017-18) • An expert from industry is included as BoS member for regular and constant involvement in improvement in curriculum and course contents. |

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| | | | Appendix IX Survey Forms Feedback forms Minutes of BoS Minutes of Academic Council |
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|------------------|---------------------------------|---|---|-------------------|---------|---------|---------|---------|---------|--|--------------------|--|--|-------------------|--|------------------|------|------|------|------|------|------------|-------|-------|-------|-------|-------|
| 4 | Students' Performance | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.2 | Academic Performance (C) | As per SAR | <p>Academic Performance Index for the consecutive years are represented in the following table:</p> <table border="1"> <thead> <tr> <th><i>Year</i></th> <th>2013-17</th> <th>2012-16</th> <th>2011-15</th> <th>2010-14</th> <th>2009-13</th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="3"><i>After visit</i></td> <td colspan="2"><i>As per SAR</i></td> </tr> <tr> <td><i>Mean CGPA</i></td> <td>7.13</td> <td>6.96</td> <td>6.95</td> <td>6.83</td> <td>6.81</td> </tr> <tr> <td><i>API</i></td> <td>14.26</td> <td>13.92</td> <td>13.90</td> <td>13.66</td> <td>13.62</td> </tr> </tbody> </table> <p>Mean CGPA of pass out students' show an increasing trend resulting in optimistic trend in API.</p> | <i>Year</i> | 2013-17 | 2012-16 | 2011-15 | 2010-14 | 2009-13 | | <i>After visit</i> | | | <i>As per SAR</i> | | <i>Mean CGPA</i> | 7.13 | 6.96 | 6.95 | 6.83 | 6.81 | <i>API</i> | 14.26 | 13.92 | 13.90 | 13.66 | 13.62 |
| <i>Year</i> | 2013-17 | 2012-16 | 2011-15 | 2010-14 | 2009-13 | | | | | | | | | | | | | | | | | | | | | | |
| | <i>After visit</i> | | | <i>As per SAR</i> | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Mean CGPA</i> | 7.13 | 6.96 | 6.95 | 6.83 | 6.81 | | | | | | | | | | | | | | | | | | | | | | |
| <i>API</i> | 14.26 | 13.92 | 13.90 | 13.66 | 13.62 | | | | | | | | | | | | | | | | | | | | | | |

| Item (CGPA) | 2013-17 | 2012-16 | 2011-15 | 2010-14 | 2009-13 | | | | | | | | | | | | | | | | | | | | | |
|--|---|-----------------------|---|------------|---------|-----|---------------|-----------------------|---|-----------|---|---|-----------|----|---|-----------|----|---|-----------|---|---|-----------|---|---|-----------|---|
| | After the visit | | | As per SAR | | | | | | | | | | | | | | | | | | | | | | |
| $9 \leq \text{CGPA} < 10$ | 3 | 2 | 2 | 2 | 5 | | | | | | | | | | | | | | | | | | | | | |
| $8 \leq \text{CGPA} < 9$ | 19 | 23 | 22 | 15 | 7 | | | | | | | | | | | | | | | | | | | | | |
| $7 \leq \text{CGPA} < 8$ | 30 | 33 | 29 | 40 | 29 | | | | | | | | | | | | | | | | | | | | | |
| $6 \leq \text{CGPA} < 7$ | 37 | 32 | 33 | 27 | 31 | | | | | | | | | | | | | | | | | | | | | |
| $5 \leq \text{CGPA} < 6$ | 9 | 25 | 24 | 28 | 27 | | | | | | | | | | | | | | | | | | | | | |
| Students' Publications | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of publications of students (academic year wise) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>S.N</th> <th>Academic Year</th> <th>Number of Publication</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2017-2018</td> <td>8</td> </tr> <tr> <td>2</td> <td>2016-2017</td> <td>18</td> </tr> <tr> <td>3</td> <td>2015-2016</td> <td>12</td> </tr> <tr> <td>4</td> <td>2014-2015</td> <td>3</td> </tr> <tr> <td>5</td> <td>2013-2014</td> <td>3</td> </tr> <tr> <td>6</td> <td>2012-2013</td> <td>2</td> </tr> </tbody> </table> | | | | | | S.N | Academic Year | Number of Publication | 1 | 2017-2018 | 8 | 2 | 2016-2017 | 18 | 3 | 2015-2016 | 12 | 4 | 2014-2015 | 3 | 5 | 2013-2014 | 3 | 6 | 2012-2013 | 2 |
| S.N | Academic Year | Number of Publication | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2017-2018 | 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2016-2017 | 18 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 2015-2016 | 12 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 2014-2015 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 2013-2014 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 2012-2013 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| APPENDIX X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.4 | Professional activities | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4.4.4 Entrepreneurship initiatives, product designs, and innovations | Not evident | <ul style="list-style-type: none"> • An Entrepreneurship cell has been started as TIED cell of University to cater the entrepreneurial acumen of the students. • An ECE technical club, <i>Technovatorz</i>, has been formed that organizes various technical events like circuit mania, design initiatives, product design which enhance the students' competency for being an entrepreneur. | | | | | | | | | | | | | | | | | | | | | | | |

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| | | | <p>http://www.juit.ac.in/technovatorz-electronics-club</p> <ul style="list-style-type: none"> • An IPR cell has been constituted in the University. • Entrepreneurship initiatives are reflected through setting up start-ups by few of our alumnus such as • Electrovese Solutions- www.electrovese.com • Ghoomke.com http://www.ghoomke.com/ • Bhaiiji.com http://bhaiiji.com/ and few more. • Innovative initiatives have also been taken by our students by participating actively and showing their innovative acumen during <ul style="list-style-type: none"> ➤ E- Yantra Robotics workshops, ➤ Murious Tech fest, ➤ IEEE workshop ➤ ACM workshops ➤ NASA project. |
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| 5. | Faculty Contributions | | |
| 5.5 | Faculty as participants/ resource persons in faculty development/ training activities. (C) | Participation is poor. | <ul style="list-style-type: none"> • Faculty participation in FDP programmes has improved in these years. • Some of our faculty members have been invited as Resource persons in training programmes/workshops organized by other Universities. <p>APPENDIX XI a) FDP listing XI b) Resource person</p> |

| 5.7 | Faculty research publications (W) | As per SAR | <ul style="list-style-type: none"> • All publications are published in reputed journals/ international conferences. • Number of papers published in Scopus and SCI index journals are improved. • Citation index of the faculty research has also been increased. <p>The details of these publications and indexing are on University web site http://www.juit.ac.in/ece-publications</p> | | | | | | | | | | | | |
|-------------------|---|----------------|---|-----------------|----------------|----------------|------------------|-------------------|----------------|------------|------------|-----------------|--------------|------------|----|
| 5.8 | Faculty intellectual Property rights. (D) | As per SAR | <ul style="list-style-type: none"> • Two patents have been filled by ECE faculty <table border="1" data-bbox="906 887 1449 1093"> <thead> <tr> <th>Name of Faculty</th> <th>Application No</th> <th>Date of filing</th> <th>Publication Date</th> </tr> </thead> <tbody> <tr> <td>Dr. S.V. Bhooshan</td> <td>1632/DEL/2012A</td> <td>30/05/2012</td> <td>25/07/2014</td> </tr> <tr> <td>Dr. Shruti Jain</td> <td>325/DEL/2015</td> <td>25/03/2015</td> <td>--</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • IPR cell has been constituted in the University. <p>Copyrights</p> <ul style="list-style-type: none"> • Four books in this period have been published by our faculty <p>Appendix XII (a)- Details of patents</p> <p>XII (b) - List of published books</p> | Name of Faculty | Application No | Date of filing | Publication Date | Dr. S.V. Bhooshan | 1632/DEL/2012A | 30/05/2012 | 25/07/2014 | Dr. Shruti Jain | 325/DEL/2015 | 25/03/2015 | -- |
| Name of Faculty | Application No | Date of filing | Publication Date | | | | | | | | | | | | |
| Dr. S.V. Bhooshan | 1632/DEL/2012A | 30/05/2012 | 25/07/2014 | | | | | | | | | | | | |
| Dr. Shruti Jain | 325/DEL/2015 | 25/03/2015 | -- | | | | | | | | | | | | |
| 5.9 | Faculty R&D and Consultancy (FRDC) work. (D) | As per SAR | <ul style="list-style-type: none"> • Apart from the research projects reported in SAR, faculty is enthusiastically submitting research projects. • Four funded research projects are in progress. • One International project (Indo-Poland collaboration with Piotr Cholda as the collaborator) has been sanctioned <p>Appendix XIII</p> | | | | | | | | | | | | |
| 5.10 | Faculty interaction with outside world. (W) | As per SAR | Faculty members have set up collaborations with the outside world by collaborating in | | | | | | | | | | | | |

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| | | | <p>research projects, publications, writing books, as resource persons, and conducting intellectual discussions.</p> <ul style="list-style-type: none"> • One joint project in collaboration with Poland with Piotr Cholda as the collaborator • Faculty is involved in research work with Professors/ faculty from other universities and has research papers published with them. • Books are also being published by faculty with professors of other universities. • MoU with Florida and Finland |
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|---------------|---|---|--|-------------|--|--------------|--|---------------|-------------|---------------|-------------|----|---|---|----|
| 6 | Facilities and Technical Support | | | | | | | | | | | | | | |
| 6.2 | Faculty rooms | | | | | | | | | | | | | | |
| | 6.2.1 Availability of individual faculty rooms | Small cabins for junior faculty. | <p>Due to the location of University in hilly terrain of Himachal Pradesh, there are constraints of space.</p> <p>However, individual cabins are allocated for each faculty, space in cabins is adequate for their requirements.</p> <table border="1"> <thead> <tr> <th colspan="2">After visit</th> <th colspan="2">Before Visit</th> </tr> <tr> <th>Closed cabins</th> <th>Open cabins</th> <th>Closed cabins</th> <th>Open cabins</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>8</td> <td>9</td> <td>15</td> </tr> </tbody> </table> | After visit | | Before Visit | | Closed cabins | Open cabins | Closed cabins | Open cabins | 15 | 8 | 9 | 15 |
| After visit | | Before Visit | | | | | | | | | | | | | |
| Closed cabins | Open cabins | Closed cabins | Open cabins | | | | | | | | | | | | |
| 15 | 8 | 9 | 15 | | | | | | | | | | | | |

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| 7. | Academic Support Units and Teaching- Learning Process | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.1 | Academic Support Units | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.1.1 Assessment of First Year Student Teacher Ratio(FYSTR) (C) | As per SAR | <table border="1" data-bbox="922 645 1409 1151"> <thead> <tr> <th>Year</th> <th>Number of students (approved intake strength)</th> <th>Number of faculty members (considering fractional load)</th> <th>FYSTR</th> </tr> </thead> <tbody> <tr> <td>2011-12</td> <td>480</td> <td>14</td> <td>34.29</td> </tr> <tr> <td>2012-13</td> <td>510</td> <td>23</td> <td>22.17</td> </tr> <tr> <td>2013-14</td> <td>510</td> <td>25</td> <td>20.4</td> </tr> <tr> <td>2014-15</td> <td>540</td> <td>31</td> <td>17.42</td> </tr> <tr> <td>2015-16</td> <td>510</td> <td>26</td> <td>19.6</td> </tr> <tr> <td>2016-17</td> <td>510</td> <td>26</td> <td>19.6</td> </tr> </tbody> </table> <p data-bbox="906 1256 1485 1361">Continuous efforts are made to further improve FYSTR and that is evident by the year wise breakup above.</p> | Year | Number of students (approved intake strength) | Number of faculty members (considering fractional load) | FYSTR | 2011-12 | 480 | 14 | 34.29 | 2012-13 | 510 | 23 | 22.17 | 2013-14 | 510 | 25 | 20.4 | 2014-15 | 540 | 31 | 17.42 | 2015-16 | 510 | 26 | 19.6 | 2016-17 | 510 | 26 | 19.6 |
| Year | Number of students (approved intake strength) | Number of faculty members (considering fractional load) | FYSTR | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011-12 | 480 | 14 | 34.29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012-13 | 510 | 23 | 22.17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013-14 | 510 | 25 | 20.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014-15 | 540 | 31 | 17.42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015-16 | 510 | 26 | 19.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016-17 | 510 | 26 | 19.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.2 | Teaching – Learning Process | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2.2 Mentoring system to help at individual levels. (C) | Large number of students per mentor. | <p data-bbox="906 1525 1409 1630">Number of students per mentor has been reduced to 18 (UGC norm is 25) helping students at individual level.</p> <p data-bbox="906 1666 1409 1733">Individual counselling for weak students having CGPA less than 5.0</p> <p data-bbox="906 1769 1342 1836">Individual file maintained by every counsellor.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | 7.2.5 Generation of self learning facilities, and availability of materials for learning beyond syllabus(C) | No evidence for generation of material | <ul style="list-style-type: none"> • Learning material is provided individually by every faculty on INTRANET (172.16.73.6) • Course materials/ lectures are provided from NPTEL, MIT, MOOCs etc on intranet. • Students have access to highly reputed online journals (IEEE, Springer, etc.) • E-books, e-journals for every course is available to enhance their knowledge http://www.juit.ac.in/lrc/home.php |
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| 8 | Governance, Institutional Support and Financial Resources | | |
| 8.3 | Budget Allocation, Utilisation, and Public Accounting | | |
| | 8.3.3 Availability of the audited statements on the institute's website (W) | Not available on website | <ul style="list-style-type: none"> • Annual Budget is part of Annual Report which is available on the website http://www.juit.ac.in/attachments/JUITA_nnualReport201617.pdf • Annual report is sent to Government of Himachal Pradesh and the Audit Report is tabled in Legislative Assembly of Govt of H.P. |
| 8.4 | Programme Specific Budget Allocation, Utilisation | | |
| | 8.4.1 Adequacy of budget allocation (C) | No R&D budget | Budget provision has been made in central University budget. |

| 8.5 | Library | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|---------------------------|------------------------------|---------------------------|----------------|----------|----------|-----------|----------------|----------|----------|----------|----------------|----------|--------|-----------|----------------|----------|---------|-----------|----------------|-----------|---------|-----------|
| | 8.5.5 Library expenditure on books, magazines/journals and miscellaneous contents (C) | Inadequate expenditure | <p>The exclusive expenditure for ECE department is as under</p> <table border="1"> <thead> <tr> <th></th> <th>Books (in Rs.)</th> <th>Journals (in Rs.)</th> <th>Total (in Rs.)</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>2,29,209</td> <td>8,28,712</td> <td>10,57,921</td> </tr> <tr> <td>2015-16</td> <td>1,10,689</td> <td>7,12,118</td> <td>8,22,807</td> </tr> <tr> <td>2014-15</td> <td>1,97,828</td> <td>884380</td> <td>10,82,208</td> </tr> <tr> <td>2013-14</td> <td>3,99,366</td> <td>1209774</td> <td>16,09,140</td> </tr> <tr> <td>2012-13</td> <td>12,87,437</td> <td>1310995</td> <td>25,98,432</td> </tr> </tbody> </table> | | Books (in Rs.) | Journals (in Rs.) | Total (in Rs.) | 2016-17 | 2,29,209 | 8,28,712 | 10,57,921 | 2015-16 | 1,10,689 | 7,12,118 | 8,22,807 | 2014-15 | 1,97,828 | 884380 | 10,82,208 | 2013-14 | 3,99,366 | 1209774 | 16,09,140 | 2012-13 | 12,87,437 | 1310995 | 25,98,432 |
| | Books (in Rs.) | Journals (in Rs.) | Total (in Rs.) | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016-17 | 2,29,209 | 8,28,712 | 10,57,921 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015-16 | 1,10,689 | 7,12,118 | 8,22,807 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014-15 | 1,97,828 | 884380 | 10,82,208 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013-14 | 3,99,366 | 1209774 | 16,09,140 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012-13 | 12,87,437 | 1310995 | 25,98,432 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.7 | Safety norms and checks | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8.7.4 Handling of hazardous chemicals and such other activities (W) | Disposal of hazardous chemicals not proper | There are no hazardous chemicals handled in ECE department. | | | | | | | | | | | | | | | | | | | | | | | | |

| Criterion-9 Continuous improvement | | | |
|---|--|---|--|
| ITEM NO. | PARAMETERS/SUB - PARAMETERS | OBSERVATIONS OF THE VISITING TEAM | COMPLIANCE STATUS (ACTION TAKEN BY INSTITUTION) |
| 9.5 | Improvement in Faculty Research Publications, R&D Work and Consultancy Work | Not all faculty contribute to research output | <ul style="list-style-type: none"> • Around 90% of faculty are engaged in research work. • Average publications per faculty are increasing on yearly basis. • Faculty is also actively involved in publishing books with good publishing houses. • Four research projects are already sanctioned and are being pursued by faculty, and four more projects are submitted to the nodal agencies. |

| | | | |
|-----|--|---|--|
| 9.6 | Continuing Education | No activity in some of the year | <ul style="list-style-type: none"> • FDP, Workshops, summer schools are organised during the said period. • Three International Conferences has been organised by the department. http://www.juit.ac.in/ispcc_2013/ http://www.juit.ac.in/ispcc_2017/ • Number of PhD scholars pursuing and granted have increased. http://www.juit.ac.in/department/electronics/PhDScholarsECE.php • Faculty attending FDP/ workshops and summer schools have also increased. |
| 9.8 | Overall Improvements since last accreditation, if any, otherwise, since the commencement of the programme | Improvement in linkage with industry not evident. | Nonetheless, we have been inviting experts from industry to interact with faculty and students. |

| | |
|--|---|
| | <p>Details of the Action taken on the Observation of NBA during last visit:</p> <ol style="list-style-type: none"> 1. Steps have been taken to organize workshops and FDP every year. 2. Department organize International IEEE conference in alternate year. 3. Innovative initiatives have also been taken by our students by participating actively and showing their innovative acumen. <p>Following facilities are present before evaluation for strengthening the curriculum and/or meeting the POs:</p> <ol style="list-style-type: none"> 1. Latest electives 2. Interdisciplinary courses 3. More research scholars 4. Improvement in quality of research papers and citation index of faculty. <p>Following facilities are created after evaluation for strengthening the curriculum and/or meeting the POs:</p> <ol style="list-style-type: none"> 1. Virtual Lab experiments included in the lab courses. 2. Robotics Lab. 3. NPTEL 4. MOOC Courses |
|--|---|

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

FACULTY DETAILS OF THE DEPARTMENT

CAY (2017-18)

| Name of the faculty member | Highest Qualification D.Sc./ Ph.D./ M.Phil/ M.Tech/ MBA/ M.Sc/ MA/ B.Tech | Awarded by University | Year | Designation Professor/ Assoc Prof/ Assist Prof | Date of joining the institution (DD/MM/YYYY) |
|-----------------------------------|---|--|-------------|--|--|
| S .V. Bhooshan | Ph.D. | University of Illinois at Urbana-Champaign | 1974 | Professor | 06/08/2002 |
| Ghanshyam Singh | Ph.D. | IIT, BHU Varanasi | 2000 | Professor | 24/03/2006 |
| Samir Dev Gupta | Ph.D. | JIIT, Noida | 2012 | Professor | 25/04/2015 |
| Shruti Jain | Ph.D. | JUIT, Wagnaghat | 2012 | Associate Professor | 15/04/2008 |
| Rajiv Kumar | Ph.D. | NIT, Kurukshetra | 2010 | Associate Professor | 10/01/2005 |
| Neeru Sharma | Ph.D. | JUIT, Wagnaghat | 2013 | Assistant Professor | 14/08/2007 |
| Meenakshi Sood | Ph.D. | JUIT, Wagnaghat | 2016 | Assistant Professor | 10/01/2011 |
| Pragya Gupta | M. Tech. | University of Allahabad | 2004 | Assistant Professor | 27/07/2009 |
| Pradeep Garg* | M. Tech. | JIIT, Noida | 2009 | Assistant Professor | 10/07/2010 |
| Munish Sood | M. Tech. , MBA (HR) | JUIT, Wagnaghat | 2011, 2008 | Assistant Professor | 24/08/2006 |
| Salman Raju | Ph.D. | JUIT, Wagnaghat | 2017 | Assistant Professor | 10/07/2010 |
| Sunil Datt Sharma | Ph.D. | JUET, Guna | 2015 | Assistant Professor | 17/08/2015 |
| Shweta Pandit | Ph.D. | JUIT, Wagnaghat | 2015 | Assistant Professor | 10/08/2015 |
| Alok Kumar* | M. Tech. | IIT, BHU Varanasi | 2011 | Assistant Professor | 02/11/2015 |

Appendix I

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

FACULTY DETAILS OF THE DEPARTMENT

| | | | | | |
|--------------------|----------|---|------|---------------------|------------|
| Nafis Uddin Khan | Ph.D. | ABV-IIITM, Gwalior | 2013 | Assistant Professor | 14/01/2017 |
| Ashwani Sharma | Ph.D. | University of Deusto, Bilbao, Spain | 2015 | Assistant Professor | 14/07/2016 |
| Naveen Jaglan | Ph.D. | JIIT, Noida | 2017 | Assistant Professor | 06/03/2017 |
| Mohit Garg | M. Tech. | NIT, Kurukshetra | 2016 | Assistant Professor | 20/08/2016 |
| Harsh Sohal | Ph.D. | Kyung Hee University, South Korea | 2014 | Assistant Professor | 27/03/2017 |
| Nishant Jain | Ph.D. | IIT, Roorkee | 2017 | Assistant Professor | 01/05/2017 |
| Emjee Puthooran | Ph.D. | IIT, Roorkee | 2014 | Assistant Professor | 30/03/2017 |
| Vikas Baghel | Ph.D. | IIT, Bhubaneswar | 2014 | Assistant Professor | 01/04/2017 |
| Sujit Kumar Patel | Ph.D. | JUET, Guna | 2016 | Assistant Professor | 14/01/2017 |
| Piyush Okas | M. Tech. | ISM, Dhanbad | 2016 | Assistant Professor | 19/07/2016 |
| Ajay Kr Agarwal* # | M.Tech. | IIT, Delhi | 2013 | Assistant Professor | 04/07/2013 |

Note : * Faculty currently pursuing Ph.D.

Presently on sabbatical leave.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Vision

To become a center of excellence; to produce high quality, self motivated, creative, ethical engineers and technologists contributing effectively to universal science and contemporary education.

Mission

- M1.** To impart high quality electronics and communication engineering education and professional ethics to students.
- M2.** To adopt the best pedagogical methods in order to maximize knowledge transfer.
- M3.** To have adequate mechanisms to enhance understanding of implementation of theoretical concepts in practical scenarios.
- M4.** To carry out high quality research leading to the creation of knowledge and of intellectual property.
- M5.** To provide the best facility, infrastructure, and environment to its students, researchers and faculty members, creating an ambience conducive for excellence in technical education and research.

Department of Electronics & Communication Engineering

Programme: Bachelor of Technology (ECE)

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

1. To acquire a strong background in basic sciences and mathematics and ability to use them in electronics and communication engineering.
2. To develop the ability to demonstrate technical competence in the fields of electronics and communication engineering and develop solutions to the problems or various areas of electronics and communication engineering.
3. To attain professional excellence through life-long learning.
4. To attain the qualities of professional leadership to deliver effectively in a multi-disciplinary team and scenario.
5. To produce graduates who maintain ethical and moral behaviour.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

1. PSOs to address particular aspects of ECE through subject-level studies.
2. Students should be aware of contemporary issues and their implications.
3. Demonstrate proficiency in use of software and hardware required for practice Electronics and communication problems.
4. Student possess the communication skills effectively both orally and in writing, should the able to demonstrate the practice of professional ethics and adherence to quality.

PROGRAMME OUTCOMES

- Engineering graduates will be able to:
1. **Engineering knowledge:** Apply the knowledge of mathematics, sciences, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
 2. **Problem analysis:** Identify, formulate, research relevant literature, and analyze complex engineering problems reaching substantiated conclusions using the principles of mathematics, natural sciences, and engineering sciences.
 3. **Design/development of solutions:** Design solutions for complex engineering problems and design system integration of processes that meet the specified needs with appropriate considerations 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:** Choose, apply and update 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 related to the extended knowledge to learn, assess, learn, skills, legal and ethical 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, with an ability 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 them to one's own work, as a member or 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 broader context of technological change.

APPENDIX III: Vision-Mision and PEO Survey Form

Dear Respondent,

We are carrying out formulation and review of the Vision, Mission and Programme Educational Objectives (PEOs) of the department. Therefore, we request you kindly to provide us your valuable feedback.

* Required

Name *

Your answer

Stakeholder Type *

Parent

Alumni

Employer

External Examiner

Vision :- To become a center of excellence; to produce high quality, self motivated, creative, ethical engineers and technologists contributing effectively to universal science and contemporary education. *

Excellent

Very Good

Satisfactory

Not Satisfactory

Unable to Judge

Mision-1:- To impart high quality Electronics and Communication Engineering education and professional ethics to students. *

Excellent

Very Good

Satisfactory

Not Satisfactory

Unable to Judge

Mision-2:- To adopt the best pedagogical methods in order to maximize knowledge transfer. *

Excellent

Very Good

Satisfactory

Not Satisfactory

Unable to Judge

Mision-3:-To have adequate mechanisms to enhance understanding of implementation of theoretical concepts in practical scenarios. *

Excellent

Very Good

Satisfactory
Not Satisfactory
Unable to Judge

Mision-4:- To carry out high quality research leading to the creation of knowledge and of intellectual property. *

Excellent
Very Good
Satisfactory
Not Satisfactory
Unable to Judge

Mision-5:- To provide the best facility, infrastructure, and environment to its students, researchers and faculty members, creating an ambience conducive for excellence in technical education and research. *

Excellent
Very Good
Satisfactory
Not Satisfactory
Unable to Judge

PEO-1:- To acquire a strong background in basic science and mathematics and ability to use these tools in Electronics and Communication

Engineering. *

Excellent
Very Good
Satisfactory
Not Satisfactory
Unable to Judge

PEO-2:- To develop the ability to demonstrate technical competence in the fields of Electronics and Communication Engineering and develop solutions to the problems in various areas of Electronics and Communication

Engineering. *

Excellent
Very Good
Satisfactory
Not Satisfactory
Unable to Judge

PEO-3:- To attain professional excellence through life-long learning. *

Excellent
Very Good
Satisfactory
Not Satisfactory

Unable to Judge

PEO-4:- To attain the qualities of professional leadership to deliver effectively in a multi-disciplinary team and domains. *

Excellent

Very Good

Satisfactory

Not Satisfactory

Unable to Judge

PEO-5:- To produce graduates who ensure ethical and moral behaviour. *

Excellent

Very Good

Satisfactory

Not Satisfactory

Unable to Judge

Any suggestions regarding Vision, Mission and PEOs of the department.

Your answer

SUBMIT

Appendix IV : Employer Survey Form(Department of ECE)

Date: __/__/

Name :

Name of the Company/ Institution:

Sector to which it belongs: Finance/ Banking/ Medical/ Law/ Health care/ Education / Others

Designation:

Relationship with JUIT graduates: Employer

Dear Respondent,

We are carrying out formulation and review of our Vision, Mission, Programme Educational Objectives (PEOs) and Programme Outcomes (POs) of the department. Therefore, we request you kindly to provide us your valuable feedback on our programme that you might have observed. This will help us in tuning our programme to bridge the gap if any. Your help in providing feedback is greatly appreciated.

| How do you rate the current potential of JUIT CSE alumni working in your organization on the following capabilities: | Highly Satisfied | Quite Satisfied | Satisfied | Not Satisfied | Unable to Judge |
|--|------------------|-----------------|-----------|---------------|-----------------|
| Application of mathematical foundations | | | | | |
| Application of computer science theory and Practice | | | | | |
| Application of modeling & design of computer based systems | | | | | |
| Application of engineering knowledge in their domain | | | | | |
| Design and conduct experiments, analyze and interpret data | | | | | |
| Analyze the problem , subdivide into smaller tasks with interface for among components | | | | | |
| Complete the project (given task) within the specified time frame and financial constraints | | | | | |
| Proposal of original ideas and solutions | | | | | |
| Design, implement, and evaluate hardware/software systems with security features | | | | | |
| Design, implement, and evaluate hardware/software systems with assured quality and efficiency | | | | | |
| Effective communication of engineering solution to peers, customers and users | | | | | |
| Understanding of contemporary issues | | | | | |
| lifelong learning and team work | | | | | |

***Any Suggestions**

..... **Signature**

Appendix V : Program Evaluation Committee

http://www.juit.ac.in/pdf/PEC_MINUTES.pdf

http://www.juit.ac.in/pdf/PEC_NOTICE.pdf

Department of Electronics and Communication Engineering

JUIT, Waknaghat

Dated: 03.12.2015.

Minutes

The minutes of the "programme evaluation committee" meeting held on 02.12.2015 at 5.00 PM in the board room of JUIT, Waknaghat.

Following "programme evaluation committee" members were present:

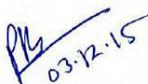
1. Prof. Sunil Bhooshan
2. Dr. Pradeep Kumar
3. Ms. Meenakshi Sood
4. Mr. Mohd Wajid

Discussion and decisions taken up:

- 1) The Programme Educational Objectives and Programme Outcomes of B.Tech Programme were assessed and evaluated.
- 2) It has been decided that at present no revision is required and feedback from the BoS committee will be taken for further action.


Mr. Mohd Wajid


Dr. Meenakshi Sood


Dr. Pradeep Kumar


(Prof. Sunil Bhooshan)

Appendix VI

B Tech ECE

| Attainment of POs/PSOs through COs | | | | | | | | | | | | | | | | | | |
|------------------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--------|--------|--------|--------|
| S.No | Course | PO-1 | PO-2 | PO-3 | PO-4 | PO-5 | PO-6 | PO-7 | PO-8 | PO-9 | PO-10 | PO-11 | PO-12 | | PSO-1 | PSO-2 | PSO-3 | PSO-4 |
| 1 | SEM-I | 1.801 | 1.701 | 1.871 | 1.698 | 1.923 | 1.593 | 0.968 | 1.416 | 1.41 | 1.675 | 1.483 | 1.563 | | 1.25 | 1.1667 | 1.875 | 1.75 |
| 2 | SEM-II | | | | | | | | | | | | | | | | | |
| 3 | SEM-III | 1.744 | 1.696 | 1.67 | 1.314 | 1.463 | 0.931 | 1.231 | 1.037 | 1.364 | 1.489 | 1.398 | 1.526 | | 1.9889 | 1.4361 | 2.0167 | 1.8333 |
| 4 | SEM-IV | | | | | | | | | | | | | | | | | |
| 5 | SEM-V | 1.864 | 1.797 | 1.914 | 1.852 | 1.755 | 1.249 | 1.084 | 1.17 | 1.455 | 1.264 | 1.088 | 1.191 | | 2.0229 | 1.8958 | 1.625 | 1.5958 |
| 6 | SEM-VI | | | | | | | | | | | | | | | | | |
| 7 | SEM-VII | 1.657 | 1.732 | 1.878 | 1.738 | 1.458 | 1.629 | 1.19 | 1.445 | 1.387 | 1.447 | 1.078 | 1.746 | | 1.4508 | 1.3592 | 1.3725 | 1.3 |
| 8 | SEM-VIII | | | | | | | | | | | | | | | | | |
| | Average Attainment Score | 1.766 | 1.731 | 1.833 | 1.65 | 1.649 | 1.351 | 1.118 | 1.267 | 1.404 | 1.468 | 1.262 | 1.506 | | 1.6782 | 1.4644 | 1.7223 | 1.6198 |
| | Average Attainment Score (%) | 58.88 | 57.71 | 61.1 | 55.01 | 54.98 | 45.02 | 37.28 | 42.23 | 46.8 | 48.95 | 42.05 | 50.21 | | 55.939 | 48.815 | 57.41 | 53.993 |

ANNEXURE VI A

The agenda for the Department of Electronics and Communication Engineering for the approval of Academic Council are:

1. A minor revision is done in the course curriculum of B Tech program for 2016 batch onwards or if the academic council decides, it may be valid for 2017 batch. Three new subjects have to be introduced in the 4th & 5th semester; syllabi of the subjects are to be approved. (**Appendix EC.I**)
 - a) **Analogue and Digital Communications**
 - b) **Linear Integrated Circuits**
 - c) **Microwave & Antenna Design**

2. The syllabi of three laboratory subjects are introduced by Program Evaluation committee of the department and approved by BOS are put forth for the approval. (**Appendix EC.II**)
 - a) **Analogue and Digital Communications Lab**
 - b) **Linear Integrated Circuits Lab**
 - c) **Microwave & Antenna Design Lab**

3. The syllabi of five subjects are revised by Program Evaluation committee of the department and approved by BOS are put forth for the approval. (**Appendix EC.III**)
 - a) **Basic Electronics**
 - b) **Analogue Electronics**
 - c) **Electrical Machines and Instruments**
 - d) **Telecommunication Networks**
 - e) **Theory and application of Control Systems**

4. For the running program, three core courses of the scheme are revised, and to be approved. These have already been implemented (**Appendix EC.IV**)
 - a) **Electrical Circuit Analysis**
 - b) **Basic Electronics (For 4th sem Bio)**
 - c) **Electromagnetic Engineering**

5. For the running program, two elective courses of the scheme are revised, and are to be approved. These two courses are already being run. (**Appendix EC.V**)
 - a) **Cognitive Radio**
 - b) **Antenna Theory and Techniques**

ANNEXURE VI B

Tech new courses including new electives / modifications to existing courses in following format

| Course Name | Code | Modified Name | Remarks |
|--|----------------|--------------------------------|-------------------------------|
| Microwave and Antenna Design | 17B11EC512 | Microwave Devices and Antennas | Renaming of the subject |
| Microwave Devices and Antennas (a) | 17B11EC512 | -- | Minor revision of syllabus |
| Analogue Electronics Lab (b) | 10B17EC372 | -- | New lab introduced |
| Robotic Systems and Control (c) | 17B1WEC733 | -- | New elective course (B-Tech) |
| Time Frequency analysis and its applications (d) | 17B1WEC731 | -- | New elective course (B-Tech) |
| VLSI in Biomedical Processing System (e) | 17M1WEC331 | -- | New elective courses (M-Tech) |
| Computational Intelligence and its Applications (f) | 17M1WEC332 | -- | New elective courses (M-Tech) |
| Antenna theory and Design (g) | To be allotted | -- | New course |
| Network analysis and synthesis (h) | To be allotted | -- | New course |
| Microwave Devices & Antenna Design Lab | 17B17EC572 | Antenna theory and Design Lab | Renaming of the subject |

Appendix VII

The following pedagogy is used for courses:

- Lectures
- Quizzes
- Tutorials
- Assignments
- Group discussions
- Self-study presentations
- Course Laboratory projects
- Remedial classes

Teaching aids:

- e-Learning online materials: <http://www.juit.ac.in/lrc/ejournals.php>
- NPTEL: 172.16.73.132
- IEEE, ACM, SPRINGER journals: <http://www.juit.ac.in/lrc/eResources.php>
- MIT Open Courseware: <http://ocw.mit.edu/index.htm>

| Jaypee University of Information Technology, Waknaghat | | | | | | | | | | |
|--|------------|--------------------|------------------------------|------------------------------------|--|---|-------------|-----------------|----------|------------|
| Jan-May 2015, B Tech VI sem | | | | | | | | | | |
| Subject Code: 10B11EC612 | | | | | | | | | | |
| Name of the Subject: VLSI TECHNOLOGY AND APPLICATIONS | | | | | | | | | | |
| S. N | Enrol. No. | Name | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | March 23- 28 | March 31- April 4 | April 6-11 | April 13-18 | April 20-25 | April 27- May 2 | May 4- 9 | May 11- 16 |
| 1 | 121001 | Palak Kaistha | 4 bit Ripple carry adder | | | | | | | |
| 2 | 121002 | Paras Goyal | | | | | | | | |
| 3 | 121004 | Akshay Kataria | | $\Sigma(1, 3, 5, 6)$ using decoder | | | | | | |
| 4 | 121005 | Shivangi Varshney | | | | | | | | |
| 5 | 121006 | Abhilasha | 64:1 mux using 8:1 | | | | | | | |
| 6 | 121007 | Utkarsh Srivastava | | | | | | | | |
| 7 | 121008 | Anshul Goyal | | Full sub using 4:1 mux | | | | | | |
| 8 | 121009 | Krishan | | | | | | | | |
| 9 | 121010 | Arpit Chitransh | Full adder using deoder | | | | | | | |
| 10 | 121012 | Arunabho | | | | | | | | |
| 11 | 121013 | Sakshi Singh | | Full adder using 4:1 mux | | | | | | |
| 12 | 121014 | Rajat Rana | | | | | | | | |
| 13 | 121015 | Aniruddh Singh | Full subtractor using deoder | | | | | | | |
| 14 | 121017 | Prashant Bhardwaj | | | | | | | | |
| 15 | 121018 | Ashutosh Kahol | | $\Sigma(2, 4, 6, 7)$ using decoder | | | | | | |
| 16 | 121019 | Girik Gupta | | | | | | | | |
| 17 | 121020 | Utkarsh Sharma | | | 4 bit Subtractor | | | | | |
| 18 | 121022 | Praveen Bagriya | | | | | | | | |
| 19 | 121023 | Sachin Arora | | | | PISO register | | | | |
| 20 | 121024 | Shruti Patial | | | | | | | | |
| 21 | 121025 | Aditi | | | PIPO register | | | | | |
| 22 | 121026 | Munish Singh | | | | | | | | |
| 23 | 121027 | Dhruv Raj Singh | | | | Decade asynchnonus counter using JK flip flop | | | | |
| 24 | 121028 | Utkarsh Sharma | | | | | | | | |
| 25 | 121029 | Gaurav Gupta | | | Mod 5 asynchnonus counter using JK flip flop | | | | | |
| 26 | 121030 | Akash Garg | | | | | | | | |
| 27 | 121031 | Pradeep Tomar | | | | Full adder using demultiplexer | | | | |
| 28 | 121032 | Rahul Saxena | | | | | | | | |

| | | | | | | | | | |
|----|--------|------------------|--|--|--|--|--|---|--|
| 29 | 121033 | Swati Tiwari | | | | Decade asynschronous counter using D flip flop | | | |
| 30 | 121034 | Aadarsh Yadav | | | | | | | |
| 31 | 121102 | Swati Thakur | | | | Decade Sysnchronous counter using JK flip flop | | | |
| 32 | 121103 | Abhishek Gupta | | | | | | | |
| 33 | 121104 | Abhinab Thakur | | | | | | Mod 12 asynschronous counter using JK flip flop | |
| 34 | 121105 | Lakshdeep Singh | | | | | | | |
| 35 | 121106 | Sumeha Mahajan | | | | | Decade Sysnchronous counter using T flip flop | | |
| 36 | 121107 | Kritika Sood | | | | | | | |
| 37 | 121108 | Baiza Sajjad | | | | | Mod 12 asynschronous counter using D flip flop | | |
| 38 | 121110 | Ayanti Sengupta | | | | | | | |
| 39 | 121111 | Karan Sharma | | | | | Mod 5 asynschronous counter using D flip flop | | |
| 40 | 121113 | Akshay Sharma | | | | | | | |
| 41 | 121114 | Ilika Chitranshi | | | | | | Decade Sysnchronous counter using D flip flop | |
| 42 | 121116 | Tarandeep Kalra | | | | | | | |
| 43 | 121118 | Ananya Saxena | | | | | | Full subtractor using demultiplexer | |
| 44 | 121120 | Shivi Bhatnagar | | | | | | | |
| 45 | 121121 | Pankaj Kumar | | | | | Mod 6 Sysnchronous counter using D flip flop | | |
| 46 | 121122 | Jayesh Raghav | | | | | | | |
| 47 | 121123 | Sachin Mittal | | | | | | Mod 6 Sysnchronous counter using T flip flop | |
| 48 | 121124 | Jai Prakash | | | | | | | |
| 49 | 123002 | Vinay Sehgal | | | | | | Mod 6 Sysnchronous counter using JK flip flop | |
| 50 | 123003 | Aakriti | | | | | | | |
| 51 | 123004 | Anandita Garg | | | | | Mod 5 asynschronous counter using D flip flop | | |
| 52 | 123005 | Sunny Bhusri | | | | | | | |
| 53 | 123006 | Rashi Taneja | | | | | | Mod 13 asynschronous counter using D flip flop | |
| 54 | 123008 | Akshay Modi | | | | | | | |
| 55 | 123010 | Jaya Khanna | | | | | | | |
| 56 | 111089 | Vidith Kapoor | | | | | | | |
| 57 | 101124 | Dhruv kamal | | | | | 3 bit Subtractor | | |
| 58 | | Shashank | | | | | | | |

VLSI TECHNOLOGY AND APPLICATIONS (10B1EC612)

1. Explain and draw the energy band diagram of p-channel MOS.
2. Explain the operation of p-channel MOS.
3. Derive the current equations for p-channel MOS.
4. Derive threshold voltage of p-MOS
5. Body transconductance of p-MOS
6. Get the derivation of $C_j(V)$ in terms of ϕ_0
7. Capacitance and resistance of p-MOS
8. MOS device voltage limitations.
9. Biasing of MOSFETs,

To be continued.....

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY
WAKNAGHAT**

JUIT/WKG/REGR/2017-18/480

March 7, 2018

NOTIFICATION

The Composition of the Board of Studies of the Department of Electronics & Communication Engineering of Jaypee University of Information Technology, Wagnaght, Distt. Solan (HP) is hereby notified as under:-

- | | | |
|----|--|-------------|
| 1. | Prof (Dr.) Samir Dev Gupta Dean (A&R) | Chairperson |
| 2. | Prof. (Dr.). D.T. Shahani Professor, Centre for Instrument Design & Development IIT, Delhi | Member |
| 3. | Prof. (Dr.) C.C. Tripathi Prof. & HOD, ECE University Institute of Engineering & Technology Kurukshetra University, Kurukshetra | Member |
| 4. | Dr. Balwinder Singh Coordinator & Principal Engineer Centre for Development of Advanced Computing A Scientific Society of the Ministry of Communication & Information Technology A-34, Indl Area, Phase VIII, Mohali (Pb) | Member |
| 5. | Dr. Rajiv Kumar Associate Professor, Deptt of ECE | Member |
| 6. | Dr. Shruti Jain Associate Professor, Deptt of ECE | Member |
| 7. | Dr. Neeru Sharma Asst Professor, Deptt of ECE | Member |
| 8. | Dr. Meenakshi Sood Asst Professor, Deptt of ECE | Member |

Contd...2

: 2 :

- | | | |
|-----|--|--------|
| 9. | Dr. Vikas Baghel Asst Professor, Deptt of ECE | Member |
| 10. | Dr. Ashwani Sharma Asst Professor, Deptt of ECE | Member |
| 11. | Dr. Shweta Pandit Asst Professor, Deptt of ECE | Member |



Maj Gen Rakesh Bassi, SM (Retd)
Registrar & Dean of Students

c.c.: Vice Chancellor,
Director & Academic Head

Date: March 04, 2016

To

The ECE Department
Jaypee University
Waknaghat
Shimla

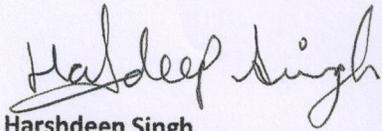
Subject: Acknowledgment of Industrial Visit

Sir/Madam,

This is to acknowledge that the Industrial Visit of the ECE students from JUIT was successfully conducted on March 4, 2016.

We appreciate the effort of the participating students and faculty members.

For **Purple Intellect Private Limited**



Harshdeep Singh
Chief Manager HR

Development

Outsourcing

Data Center

Skill Development

#C-124, Phase VIII, Industrial Area, Mohali, Punjab
www.purpleintellect.com
info@purpleintellect.com

Appendix IX -Alumni Survey Form (Department of ECE)

We appreciate your help in filling out this survey.

1. Name:.....
2. Gender: M/F
3. Email Address:.....
4. Contact No:.....
5. Year of Graduation:.....
6. Which of the following best describe your current position?

Professional [] Govt. Employee [] Business [] Higher Education []
 Entrepreneur []

7. Qualification acquired after graduation from JUIT, if any
 M.Tech. [] MBA [] MS [] PhD []

Institution Name.....

8. Indicate your perception of preparedness at JUIT:

| | Excellent | Good | Fair | Poor |
|---|-----------|------|------|------|
| Enhancement in your knowledge database | | | | |
| How do you find the Course curriculum? | | | | |
| Suggestions | | | | |
| Academic support during your stay | | | | |
| Administrative support during your stay | | | | |
| Professional and ethical responsibility developed / Personality development | | | | |
| Placement facilities | | | | |
| Exposure to societal and human context | | | | |
| Life-long learning | | | | |
| | | | | |

9. Comments/ Suggestions

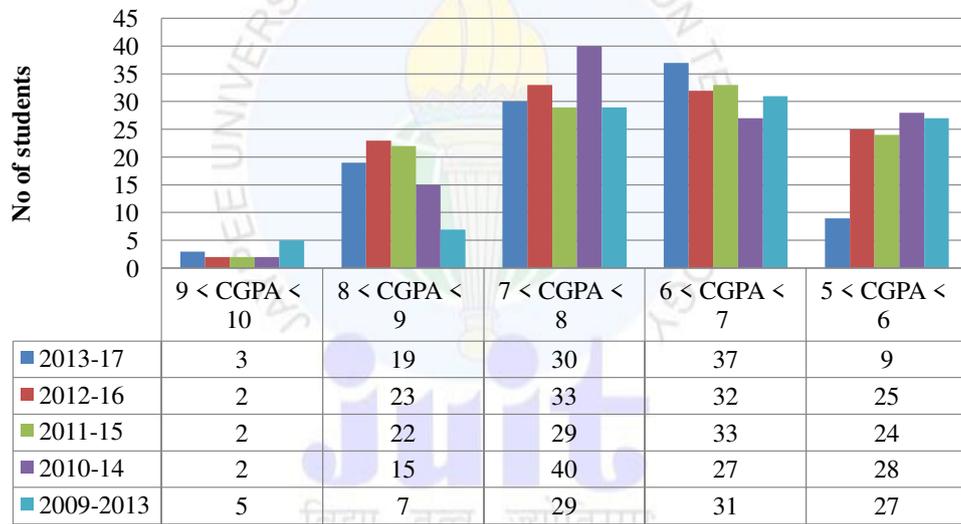
.....

Signature

Thank you for your cooperation and support.

ACADEMIC PERFORMANCE

CGPA COMPARISON



| DEPATRMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING | | | | | |
|---|----------------------------|----------------|----------------|----------------|----------------|
| Details of the participants in Faculty development/training activities/STTPs | | | | | |
| S. No. | Name of the Faculty | CAYm1 | CAYm2 | CAYm3 | CAYm4 |
| | | 2017-18 | 2016-17 | 2015-16 | 2014-15 |
| 1 | Prof. S.V. Bhooshan | 1 | 1 | 2 | 1 |
| 2 | Prof. Ghanshyam Singh | 2 | 2 | 2 | 1 |
| 3 | Dr. Meenakshi Sood | 7 | 7 | 7 | 1 |
| 4 | Munish Sood | 3 | 2 | 4 | 1 |
| 5 | Dr. Neeru Sharma | 0 | 1 | 2 | 1 |
| 6 | Pradeep Garg | 4 | 2 | 3 | 1 |
| 7 | Pragya Gupta | 3 | 0 | 2 | 1 |
| 8 | Dr. Rajiv Kumar | 6 | 3 | 2 | 1 |
| 9 | Dr. Salman Raju | 2 | 1 | 2 | 1 |
| 10 | Dr. Shruti Jain | 10 | 5 | 5 | 1 |
| 11 | Alok Kumar | 2 | 1 | 2 | 0 |
| 12 | Dr. Shweta Pandit | 5 | 1 | 2 | 0 |
| 13 | Dr. Sunil Datt | 5 | 0 | 2 | 0 |
| 14 | Dr. Ashwani Sharma | 3 | 0 | 0 | 0 |
| 15 | Dr. Nafisuddin Khan | 2 | 0 | 0 | 0 |
| 16 | Dr. Sujit Kumar Patel | 0 | 1 | 1 | 0 |
| 17 | Mohit Garg | 3 | 1 | 0 | 0 |
| 18 | Piyush Okas | 0 | 0 | 0 | 0 |
| 19 | D.S Saini | NA | NA | 1 | 1 |

| | | | | | |
|----|----------------------|------------|-----------|-----------|-----------|
| 20 | M. Wajid | NA | NA | 3 | 1 |
| 21 | Pradeep Chauhan | NA | NA | 2 | 1 |
| 22 | T.S.Lamba | NA | NA | 2 | 1 |
| 23 | Vanita Rana | NA | NA | 2 | 2 |
| 24 | Akhil Ranjan | NA | NA | 0 | 1 |
| 25 | Bhaskar Gupta | NA | NA | 0 | 1 |
| 26 | Dr. Jitender Virmani | NA | NA | 0 | 1 |
| 27 | SVRK Rao | NA | NA | 0 | 1 |
| 28 | Tapan Jain | NA | NA | 0 | 1 |
| 29 | Kaushlender Pandey | NA | NA | 0 | 1 |
| 30 | Dr. Harsh Sohal | 4 | 1 | NA | NA |
| 31 | Dr. Emjee Puthooran | 4 | 1 | NA | NA |
| 32 | Dr. Vikas Baghel | 4 | 1 | NA | NA |
| 33 | Dr. Naveen Jaglan | 4 | 0 | NA | NA |
| 34 | Dr. Nishant Jain | 7 | 1 | NA | NA |
| | Total | 81 | 32 | 48 | 22 |
| | Aggregate | 183 | | | |

Resource Person / Session Chair

MEENAKSHI SOOD

- **Dr. Meenakshi Sood** nominated as Member of the **Experts Committee (EC) for Evaluation of Impact of DST-FIST Scheme.**
- Technical Expert/ Resource person UIIT, HP UNIVERSITY
- Technical expert in the interview board at MNIT JAIPUR 1-3 April 2014
- Expert for evaluation of M Tech NIT Hamirpur.
- Delivered expert lecture on “Mobile and Wireless Communication” on 3rd Dec 2016 at UIIT, H. P University, Shimla.
- Expert Lecture on “Biomedical Signal Analysis for Diagnosis Decision Support system” in PEC Chandigarh on 29th Sep 2016.
- Expert Lecture on “Biomedical Signal Analysis” in NIT Hamirpur on 25 Feb 2016.
- 12th INDIACom: 5th 2018 International Conference on Computing for Sustainable Global Development, BVICAM, New Delhi, India, March 14th – 16th, 2018.
- 11th INDIACom: 4th 2017 International Conference on Computing for Sustainable Global Development, BVICAM, New Delhi, India, March 1st – 3rd, 2017.
- Chair a technical session of International Conference on Recent Innovations in Computer Science & Information Technology (RICSIT - 2017) held on 19th May 2017 in the Silverwood Estate, University Institute of Information Technology, H.P. University, Shimla.
- 2016 International Conference on Industrial Informatics and Computer Systems (CIICS), American University of Sharjah, Sharjah, March 13-15, 2016.

SHRUTI JAIN

AWARD :

1. Certificate of Appreciation for mentoring project submitted to Texas Instruments Innovation Challenge India Design Contest 2015.

Editorial Board:

1. Network Biology (ISSN 2220-8879),
2. International Journal of Computer Science and Information Technology Research Excellence (ISSN 2250-2742),
3. Journal of Harmonized Research Publication.
4. International Journal of Advance Engineering and Research Development (IJAERD) (ISSN 2348-4470 online, 2348-6406 Print)
5. Science International

Associate Editor : iINNOVATION

<http://kpublishinggroup.info/innovation/about.html>

Society Board : International Society of Network Biology

Board Member : International Journal of Multidisciplinary Research and Modern Education, R&D Modern Research Publication, Perambalur, Tamilnadu, India.

Reviewer :

Journal :

- 1) International Journal of Computer and Information Technology (IJCIT)
- 2) International Journal of Scientific Engineering and Technology (IJSET)
- 3) Journal of Harmonized Research Publication (JOHR)
- 4) International Journal Of Environmental Science And Toxicology (IJEST)
- 5) International Journal of Advanced Trends in Computer Applications (IJATCA)
- 6) International Journal of Advanced Research in Applied Science and Technology (IJARAST)
- 7) International Journal of Engineering Research and Technology (IJERT)
- 8) International Journal of Advance Engineering and Research Development (IJAERD)
- 9) International Journal of Multidisciplinary Research and Modern Education
- 10) Asian Journal of Applied Science and Technology (AJAST)
- 11) International Journal on Emerging Trends in Electronics & Communication Engineering
- 12) Science International
- 13) Bentham Science Publishers
- 14) IEEE Journal of Biomedical and Health Informatics
- 15) International Association of Engineering & Technology Researchers (IAETR)

Thesis Evaluated:

- 1) PhD thesis entitled “**Performance Improvement In Signal Conditioning Circuitry For Bioimpedance Sensors Using MOS Technology**” University of Pune by *Dnyandeo K. Shedge*, under the guidance of Dr. P. W. Wani and Dr. M. S. Sutaone, August 2014.

- 2) Phd thesis entitled “**Fuzzy C Means and Enhanced Support Vector Machine Cluster based Efficient and Safe Routing with Certificate Revocation in Mobile Adhoc Networks**” E.G.S Pillay Engineering College, Nagapattinam, by *Shajan Joseph* under the guidance of Dr. A. Rajaram (Department of Electronics & Communication Engineering), November 2016.
- 3) Phd thesis entitled “**Efficient Stable Channel Allocation With Fault Tolerant Enhanced Query Arising In Mobile Adhoc Networks** ” E.G.S Pillay Engineering College, Nagapattinam, by *S. Kannan* under the guidance of Dr. A. Rajaram (Department of Electronics & Communication Engineering), November 2016.

Session Chair :

- 1) International Conference on Recent Cognizance in Wireless Communication & Image Processing (ICRCWIP-2014), Poornima Institute of Engineering & Technology , Jaipur, Jan 16-17 ,2015.
- 2) 10th INDIACom: 3rd 2016 International Conference on Computing for Sustainable Global Development, BVICAM, New Delhi, India, March 16th – 18th, 2016.
- 3) 11th INDIACom: 4th 2017 International Conference on Computing for Sustainable Global Development, BVICAM, New Delhi, India, March 1-3, 2017.
- 4) International Conference on Futuristic Trends in Network and Communication Technologies (FTNCT-2018), Department of Computer Science & Engineering and Information Technology, Jaypee University of Information Technology, Solan-173234, Himachal Pradesh, INDIA, 9-10th February, 2018.
<http://www.juit.ac.in/ftnct-2018/css.php>
- 5) 12th INDIACom: 5th 2018 International Conference on Computing for Sustainable Global Development, BVICAM, New Delhi, India, March 14th -16th , 2018.
<http://www.bvicam.ac.in/indiacom/splSessionDetails.asp?sessionRequestID=652>

Guest Lecturer :

- 1) Delivered Guest lecture on “Bio Medical Signal Processing and Bio Electronic Sensor” in Maharaja Agrasen University, Baddi, Himachal Pradesh, India on December 3, 2015.
- 2) Delivered Guest lecture on “ Bio Electronic Sensor” in Giani Zail Singh Campus College of Engineering and Technology (GZS CCET), Maharaj Ranjit Singh Punjab Technical University, Bathinda, Punjab, India on December 5, 2016.
- 3) Delivered Guest lecture on “ Bio Medical Instrumentation systems” in Giani Zail Singh Campus College of Engineering and Technology (GZS CCET), Maharaj Ranjit Singh Punjab Technical University, Bathinda, Punjab, India on January 27, 2017.
- 4) Delivered Guest lecture on “Two Class Classification of Breast Lesions using Statistical and Transform Domain features” in Chandigarh Engineering College, Landran, Sector-112, Greater Mohali, Punjab-140307, India on May 15, 2017.
- 5) Delivered Guest lecture on “Two Class Classification of Lung Cancer using different feature extraction techniques” in Chandigarh Engineering College, Landran, Sector-112, Greater Mohali, Punjab-140307, India on August 24, 2017.

- 6) Delivered Guest lecture on “Implementation of fuzzy system using different voltages of OTA for JNK pathway leading to cell survival/ death” in Giani Zail Singh Campus College of Engineering and Technology (GZS CCET), Maharaj Ranjit Singh Punjab Technical University, Bathinda, Punjab, India on October 31, 2017.

PARDEEP GARG

External Examiner:

- 1) As a paper setter of Remote Sensing (EC 4130) for Bahra University, Wahnaghat in December 2017.
- 2) As a paper setter of Electronic Measurements and Instrumentation (EC-213) for Shoolini University, Solan in May 2015.
- 3) As a paper setter of Wireless Sensor Network (EC-413) for Shoolini University, Solan in December 2015.
- 4) As a paper setter of Basic Electrical Engineering (EE-101) for Shoolini University, Solan in December 2015.

Sunildatt Sharma

Question paper Setter

1. Final examination question paper setting of Samrat Ashok Technological Institute (Govt aided Autonomous institute) Vidisha, M.P. for following subjects.
 - a. Linear ICs (For B.E.)
 - b. Process control (B.E)
 - c. Vlsi design(B.E)
 - d. Probability and random process (M.Tech.)

HARSH SOHAL:

External Examiner:

- 1). Expert for evaluation of M Tech Thesis CDAC Mohali, Punjab, January 15, 2018.

Journal Reviewer:

- 1.) Journal of Engineering Science and Technology (JESTEC), Jan 2018
- 2.) IEEE Transactions on Circuits and Systems II: Express Briefs July-Oct 2017

Emjee Puthooran

Expert talk

Delivered an Expert talk on “Image Compression for Telemedicine” at the Technical Session in National Symposium on Medical Image Acquisition, Processing & Analysis at Jaypee University of Information Technology, Himachal Pradesh, India, on 20th November, 2017

Journal Reviewer

International Journal of Biometrics, Dec, 2017

Tele: 23007351
Fax: 23017582

No ERIP/IP/1401087/M/01

Ministry of Defence
Defence R&D Organisation
Dte of ER & IPR, IPR Group
Room No.348, B- Wing
DRDO Bhawan, Rajaji Marg
New Delhi -110 011

Dated 25 Mar, 2015

Director
DIHAR, (FRL)
C/o 56 APO
LEH - 901 205

Subject: FILING OF PATENT APPLICATION

A patent application on the following invention made by your laboratory has been filed with Indian Patent Office, New Delhi:-

"Energy Harvesting Footwear".

2. The following have been named as the inventors for the above mentioned invention:

Inventors name from DIHAR, Leh

- (i) Mr. Ritendra Mishra
- (ii) Dr. Sunil Kumar Hota
- (iii) Col. Vasant Ballewar
- (iv) Dr. Ravi Bihari Srivastava

Inventor name from NMRL, Ambemth, Maharashtra

- (i) Dr. Chadalapaka Durgaprasad

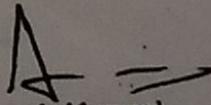
Inventor name from Jaypee University, Himachal Pradesh

- (i) Dr. Shruti Jain

3. The above application has been accorded 325/DEL/2015 as application number.

4. A copy of this letter may please be given to the concerned scientists for their record/retention.

| |
|----------------------------------|
| निदेशक सचिवालय |
| संख्या : |
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(Avinash Kumar)
Addl. Dir. (IPR)

(I) Details as provided in the SAR previously

| Name of the faculty | Project Title | Project Type Research/Consultancy | Funding Agency | Amount | Duration | Remarks |
|---------------------------|---|-----------------------------------|---|-------------|-----------|-----------|
| Dr.Ghanshyam Singh | Design and Analysis of Frequency Selective Surface at Ka/Ku Band for | Research | Space Application Centre, ISRO, Ahmedabad | 15.96 Lacs. | 2011-2014 | Completed |
| Dr.Shruti Jain | Fabrication of energy Harvesting Prototypes using Piezoelectric Materials | Research | DRDO | 9.8 Lacs. | 2012-2015 | Completed |

(II) Details after evaluation (till the date of compliance report)

| Name of the faculty | Project Title | Project Type Research/Consultancy | Funding Agency | Amount | Duration | Remarks |
|----------------------------|---|-----------------------------------|------------------------------------|------------|-----------|--------------|
| Dr. Ghanshyam Singh | Mathematical Modeling of spectrum Sharing Techniques in cognitive radio networks. | Research | ISRO | 11.10 Lacs | 2015-2017 | Sanctioned |
| | Analysis and Design of a Dielectric Rod Resonator Antenna Array at Terahertz Frequency. | Research | DRDO | 16.90 Lacs | | Under Review |
| Dr. Rajiv Kumar | Reliability Modeling and Optimized Planning of Risk-based Resilient Networks". | Research | DST Ministry of Sc and Tech Poland | 9.04 Lacs | 2015-2018 | Sanctioned |

| | | | | | | |
|--|---|----------|---|------------|---------|------------|
| Dr Shruti Jain Dr. Meenakshi Sood | Design and analysis of a thermoelectric generator for energy harvesting system from waste heat for the state of HIMACHAL PRADESH | Research | State council for Science, Technology & Env, H.P. | 5.24 lacs | 2017-19 | Sanctioned |
| Dr. Meenakshi Sood | Identification of commercial crop diseases using image processing techniques & its environmental effects for the farmers of Himachal Pradesh with feedback system using IOT and android application | Research | Department of Environment, Science & Technology H.P | 9,96,750/- | 2017-19 | Sanctioned |

