

Don Bosco College of Engineering, Fatorda
Programme Information – Electronics & Telecommunication Engineering

Academic Year 2016 - 2017

1.0. Name of the Programme

Electronics and Telecommunication Engineering

2.0. Name and Details of the Head of the Department (email, contact number)

Name: Michelle Araujo

Email: Michelle.araujo@dbcegoa.ac.in

Contact No: 0832 2741045

3.0. Year of starting the Programme

2011

4.0. Programme Details

a) Nature of the Programme: Part Time/Full Time :

Full Time

b) Duration of the Programme:

04 Years

c) Sanctioned Intake:

(FE 63+ SE 12-Diploma)

d) Year wise students on Roll

| Year | FE | SE | TE | BE |
|---------|----|----|----|----|
| 2016-17 | 63 | 71 | 76 | 69 |

5.0. Course Structure – Semester wise details**5.1. Semester wise Details**

| Sr. No | Course Title | Nature of the Course Compulsory/ Elective | Weekly Load | | |
|---|---|--|-------------|-----------|----------|
| | | | Lecture | Practical | Tutorial |
| FIRST YEAR ENGINEERING – Semester 1 and 2 | | | | | |
| 1. | Engineering Mathematics - I | Compulsory | 4 | - | - |
| 2. | Applied Science (Physics / Chemistry) | Compulsory | 3 | 2 | - |
| 3. | Engineering Mechanics | Compulsory | 3 | 2 | - |
| 4. | Fundamentals of Electrical Engineering | Compulsory | 3 | 2 | - |
| 5. | Fundamentals of Computer Engineering | Compulsory | 3 | 2 | - |
| 6. | Technical English | Compulsory | 3 | - | - |
| 7. | Workshop Practice – I | Compulsory | - | 4 | - |
| 8. | Engineering Mathematics - II | Compulsory | 4 | - | - |
| 9. | Applied Science (Physics / Chemistry) | Compulsory | 3 | 2 | - |
| 10. | Programming Languages | Compulsory | 3 | 2 | - |
| 11. | Fundamentals of Electronics and Telecommunication Engineering | Compulsory | 3 | 2 | - |
| 12. | Environmental Sciences and Social Sciences | Compulsory | 3 | - | - |
| 13. | Engineering Graphics | Compulsory | 2 | 4 | - |
| 14. | Workshop Practice - II | Compulsory | - | 4 | - |
| SECOND YEAR ENGINEERING – Semester 3 and 4 | | | | | |
| 15. | Applied Mathematics-III | Compulsory | 4 | - | - |
| 16. | Economics and Management | Compulsory | 4 | - | - |
| 17. | Algorithms for Data Structures | Compulsory | 3 | 2 | 1 |
| 18. | Electronic Devices and Circuits –I | Compulsory | 3 | 2 | 1 |
| 19. | Digital System Design | Compulsory | 3 | 2 | 1 |
| 20. | Electrical Circuits and Systems | Compulsory | 3 | 2 | 1 |
| 21. | Probability Theory and Random Processes | Compulsory | 4 | - | - |
| 22. | Signals and Systems | Compulsory | 3 | - | 1 |
| 23. | Electromagnetic Fields and Waves | Compulsory | 4 | 2 | |
| 24. | Electronic Devices and Circuits –II | Compulsory | 3 | 2 | 1 |
| 25. | Linear Integrated Circuits | Compulsory | 3 | 2 | 1 |
| 26. | Microprocessors and Interfacing | Compulsory | 3 | 2 | 1 |
| THIRD YEAR ENGINEERING – Semester 5 and 6 | | | | | |
| 27. | Probability Theory and Random Processes | Compulsory | 4 | - | - |
| 28. | Control System Engineering | Compulsory | 4 | 2 | - |
| 29. | Communication Engineering-I | Compulsory | 4 | 2 | - |
| 30. | Microprocessors | Compulsory | 4 | 2 | - |
| 31. | Digital Signal Processing | Compulsory | 4 | 2 | - |
| 32. | Transmission Lines & Waveguides | Compulsory | 4 | - | - |
| 33. | Communication Engineering-II | Compulsory | 4 | - | - |
| 34. | Peripheral Devices & Interfacing | Compulsory | 4 | 2 | - |
| 35. | Power Electronics | Compulsory | 4 | 2 | - |
| 36. | Antenna & Wave Propagation | Compulsory | 4 | - | - |

| | | | | | |
|--|------------------------------------|------------|---|----|---|
| 37. | Electronic Instrumentation | Compulsory | 4 | 2 | - |
| 38. | VLSI Technology & Design | Compulsory | 4 | 2 | - |
| 39. | Data Communication | Compulsory | 4 | 2 | - |
| FINAL YEAR ENGINEERING – Semester 7 and 8 | | | | | |
| 40. | Microwave & Radar Engineering | Compulsory | 4 | 2 | - |
| 41. | Optical Fiber Communication | Compulsory | 4 | 2 | - |
| 42. | Operating Systems | Elective | 4 | 2 | - |
| 43. | Process Control Instrumentation | Elective | 4 | 2 | - |
| 44. | Mobile Communication System | Elective | 4 | - | - |
| 45. | Secure Communications | Elective | 4 | - | - |
| 46. | Project Seminar | Compulsory | - | 4 | - |
| 47. | Satellite Television & Engineering | Compulsory | 4 | 2 | - |
| 48. | Consumer Electronics | Elective | 4 | 2 | - |
| 49. | Microwave Networks Analysis | Elective | 4 | 2 | - |
| 50. | E-commerce | Elective | 4 | 2 | - |
| 51. | Bio Medical | Elective | 4 | 2 | - |
| 52. | Wireless Communications | Compulsory | 4 | - | - |
| 53. | Project | Compulsory | - | 10 | - |

5.2. Trainings offered (BSA – Beyond Syllabus Activities)

| Topic | Year | Duration | No. of Students enrolled |
|--|------|----------|--------------------------|
| Introduction to MATLAB Workshop | 2016 | 01 day | 70 |
| BSS Research Paper Presentation | 2016 | 01 day | 72 |
| Introduction to Arduino | 2016 | 01 day | 20 |
| Workshop on Online C Test | 2016 | 01 day | 70 |
| Workshop on CCNA Basic | 2016 | 05 days | 70 |
| Workshop on Mental Ability and Quantitative | 2016 | 15 days | 70 |
| Seminar on Wireless Communication : Roadmap to 5G | 2016 | 01 day | 70 |
| Seminar on Electronics in Industry | 2016 | 01 day | 70 |
| In-house Training on Lab View and Digital Image Processing | 2017 | 05 days | 34 |
| Workshop on PSB Design | 2017 | 01 day | 57 |
| Guest Lecture on Reliability and Testing | 2017 | 01 day | 70 |
| BSS Research Paper Presentation | 2017 | 01 day | 70 |
| Internship Programme on PLC and SCADA | 2017 | 15 days | 70 |
| Workshop on Networking : A practical approach 2 | 2017 | 01 day | 30 |
| Introduction to MATLAB Workshop | 2017 | 01 day | 70 |
| Arduino Workshop | 2017 | 01 day | 35 |
| Cayenne IOT Workshop | 2017 | 01 day | 70 |
| Introduction to VHDL | 2017 | 01 day | 70 |

5.3. Results (BE only)

| Semester | Number of students | | No. of students securing $\geq 60\%$ | Pass % |
|----------|--------------------|--------|--------------------------------------|--------|
| | Appeared | Passed | | |
| 8 | 74 | 69 | 37 | 93.04 |

6.0. Department Faculty Details

a) Participation in:

i) External Sponsored Projects –

Nil

ii) Consultancy-

Nil

iii) Continuing Education-

D. S Vidhya pursuing PhD under Assam University
Mohini Naik pursuing PhD under Goa University

iv) Collaboration (Institutional/ Industrial) –

Nil

v) Students' Projects

Academic Year 2016-2017

| Sr. No | Project Title | Project Guide |
|--------|--|--------------------------|
| 1 | a. Innovative Transport Management System for Cities b. Smart Car c. Weed Detection using Image Processing | Michelle Araujo e Viegas |
| 2 | a. Smart Metro Train b. Multi Access Smart Card | Trima Fernandes e Fizado |
| 3 | a. Indoor Positioning System b. Automated Green House c. Smart Railways | Kimberly Morais |
| 4 | a. Fire Fighting robot b. Waste Sorter Machine | Samantha Cardoso |
| 5 | a. Power Line Communication b. Wireless Control Live Streaming Bot | Vidhya D S |
| 6 | a. Home Automation and Security b. Multilevel Parking System | Anisha Cotta |
| 7 | a. Solar Grass Cutter b. Voice Operated Fire Extinguisher | Melba D'Souza |

vi) Students' Guidance (M. Tech/PhD)-

Nil

vii) Invited Lectures (National/International)-

Nil

viii) Professional Society Activities -

Institution of Electronics and Telecommunication Engineers (IETE)

- Workshop on "ARDUINO" by Mr. Myron Rodrigues, Alumni DBCE

ix) Conferences, Seminars, Winter/Summer Schools, FDP, Workshops organized

| Duration | Title | Participants | Resource Persons |
|----------|--|----------------------------------|---|
| One Week | Workshop on CCNA Basics | TE(ETC) Students | Brian Fernandes |
| One Week | Workshop on Mental Ability and Quantitative Aptitude | TE(ETC) Students | Trima Fernandes Melba D'Souza Deron Rodrigues Flavia Leitao Mathilda Colaco |
| Two Days | Workshop on HTML 5 | TE(ETC)Students | Chinnu George |
| One Day | Field Trip to CIBA and Infinity 3D | BE(ETC)Students | - |
| One Day | 5th Installation of DBEATS | SE(ETC),TE(ETC),BE(ETC) students | - |
| One Day | Talk on Wireless Communication: Roadmap to 5G | BE(ETC)students, TE(ETC)students | Shailesh Kanlokar |

x) Conferences, Seminars, Winter/Summer Schools, FDP, Workshops attended

| Sr. No | Seminar/Workshop/Short Term Courses/Conferences/ Training Programmes | Date | Duration | Organization | Name of the Faculty Participated |
|--------|--|-------------------------|----------|---|---|
| 1 | Workshop on National Teachers Congress | 23 to 25 September 2016 | 03 days | MIT-Pune | Michelle Araujo e Viegas Samantha Cardoso |
| 2 | TEQIP II-ISTE approved STTP on Industrial Automation and Virtual Instrumentation | 07 to 11 November 2016 | 05 days | Don Bosco College Of Engineering, Fatorda | Michelle Araujo e Viegas Samantha Cardoso D.S Vidhya Anisha Cotta Melba D'souza Deron Rodrigues Flavia leitao Mathilda Colaco Vishnu Rathod Madhukar A |
| 3 | TEQIP II-ISTE approved STTP on IOT with Cloud | 02 to 06 January 2017 | 05 days | Don Bosco College Of Engineering, Fatorda | Michelle Viegas Samantha Cardoso Kimberly Morais D.S Vidhya Anisha Cotta Melba D'souza Deron Rodrigues Vishnu Rathod Madhukar A |
| 4 | AICTE approved FDP on Use of ICT in Education for Online and Blended Learning | 02 May to 10 July 2016 | 20 days | IIT Bombay, Remote Center K.L.E. Hubli | D.S Vidhya |
| 5 | Workshop Challenges in Software Engineering in Next Generation | 15 September 2016 | 01 day | Don Bosco College Of Engineering, Fatorda | Madhukar A |

xi) Research Publications

| Sr. No | Author Name | Title of Paper | Details of Journal Name, Volume, Series, Year/ Conference Details | National/ International |
|---------------|-----------------------------------|--|---|--------------------------------|
| 1 | Michelle Araujo e Viegas | Weed Detection using Image Processing | International Journal for Scientific Research & Development, volume 5, Issue 1, 2017, ISSN (online): 2321-0613 | International |
| 2 | Michelle Araujo e Viegas | Weed Removal Using Arduino Robot | International Journal for Scientific Research & Development, volume 5, Issue 1, 2017, ISSN (online): 2321-0613 | International |
| 3 | Michelle Araujo e Viegas | Intelligent Traffic Management and Parking Space Detection Using Raspberry Pi and Internet of Things | International Journal of Engineering Development and Research, ISSN:2321-9939, Vol.5, Issue 1, March 2017 pp. 610-615 | International |
| 4 | Michelle Araujo e Viegas | Smart Parking Space Detection Using MATLAB and Internet of Things | International Journal of Science and Engineering Development Research, ISSN:2455-2631, Vol.2, Issue 3, March 2017 pp. 60-64 | International |
| 5 | Michelle Araujo e Viegas | Smart Reverse Parking Using Raspberry Pi | International Journal of Science Research & Engineering, ISSN:2349-784X, Vol.3, Issue 07, March 2017 pp. 98-102 | International |
| 6 | Michelle Araujo e Viegas | Intelligent Automatic Street Light Control System | International Journal for Scientific Research & Development, ISSN:2321-0613, Vol.4, Issue 11, March 2017 pp. 202-205 | International |
| 7 | Trima Piedade Fernandes e Fizardo | Smart Metro Train | International Journal of Science and Research (IJSR), ISSN(online):2319-7064, Volume 6, Issue 2, February 2017, Impact Factor:6.391 | International |
| 8 | Trima Piedade Fernandes e Fizardo | Multi – Access Smart Card | IJSRD - International Journal for Scientific Research & Development, ISSN (online): 2321-0613, Volume 5 Issue 1, 2017 | International |
| 9 | Kimberly Morais | Energy Generation using Vehicular Movements and Vibrations | International Journal of Scientific Research and Development, Volume 5: Issue 1, March 2017. ISSN: 2321-0613. | International |
| 10 | Kimberly Morais | Railway Crack detection using LED | International Journal of Scientific Research and Development, Volume 5: Issue 1, April 2017. ISSN: 2321-0613. | International |
| 11 | Kimberly Morais | Automation of Railways | International Journal of Scientific Research and Development, Volume 5: Issue 1, April 2017. ISSN: 2321-0613 | International |
| 12 | Kimberly Morais | Indoor Positioning System | International Journal of Science Technology & Engineering, Volume 3: Issue 9, March 2017. ISSN (online): 2349-784X. | International |

| | | | | |
|----|------------------|--|--|---------------|
| 13 | Kimberly Morais | RFID Based Indoor Positioning System | International Journal for Scientific Research & Development, Volume 4: Issue 11, 2017. ISSN (online): 2321-0613 | International |
| 14 | Samantha Cardoso | Smart Bin Using GSM Modem | International Journal of Scientific Research and Development, Volume 4: Issue 12, Feb 2017. (ISSN:2321 0613) | International |
| 15 | Samantha Cardoso | Moisture Sensing Unit for Waste Sorter Machine | International Journal of Scientific Research and Development, Volume 4: Issue 11, Jan 2017. (ISSN:2321 0613) | International |
| 16 | Samantha Cardoso | Dark Detector System for Paper Waste Detection | International Journal of Scientific Research and Development, Volume 5: Issue 1, March 2017. (ISSN:2321 0613) | International |
| 17 | Samantha Cardoso | Wireless Communication using RF Module and Interfacing with 8051 Microcontroller | International Journal of Science Technology & Engineering, Volume 3: Issue 7, Jan 2017. (ISSN (online): 2349-784X) | International |
| 18 | D. S. Vidhya | Device Control using Power line Communication | International Journal of Scientific Research and Development, Volume 4: Issue 12, Feb 2017. (ISSN:23210613) | International |
| 19 | D. S. Vidhya | Survey on Wireless Control Live Streaming BOT | International Journal of Scientific Research and Development, Volume 4: Issue 11, Jan 2017. (ISSN:23210613) | International |
| 20 | D. S. Vidhya | Power line Communication based Current Theft and Device Control | International Research Journal of Engineering and Technology (IRJET), Volume 4: Issue 5, May 2017. | International |
| 21 | D. S. Vidhya | Wireless Communication of Spy BOT | International Journal for Scientific Research and Development (IJSRD), Volume 5: Issue 3, May 2017 (ISSN:2321 0613) | International |
| 22 | Anisha Cotta | Design and Fabrication of Automated Multi-Level Car Parking | International Journal for Scientific Research & Development, ISSN: 2321-0613, Volume 4, Issue 11, 2017 | International |
| 23 | Anisha Cotta | Automated Multilevel car parking | International Journal for Scientific Research & Development, ISSN: 2321-0613, Volume 5, Issue 01, 2017 | International |
| 24 | Anisha Cotta | Internet of Things | International Journal for Scientific Research & Development, ISSN: 2321-0613, Volume 5, Issue 01, 1 st April 2017 | International |
| 25 | Anisha Cotta | Android Based Home Security System | International Journal for Scientific Research & Development, ISSN: 2321-0613 Volume 5, Issue 01, 16 th April 2017 | International |
| 26 | Anisha Cotta | Image Processing | International Journal for Scientific Research & Development, ISSN: 2321-0613, Volume 5, Issue 01, 1 st April 2017 | International |

| | | | | |
|----|----------------|--|--|---------------|
| 27 | Anisha Cotta | Android Enabled Home Automation System using Raspberry Pi | International Journal for Scientific Research & Development, ISSN: 2321-0613, Volume 5, Issue 01, 1 st April 2017 | International |
| 28 | Anisha Cotta | Home Automation using IOT | International Journal for Scientific Research & Development, ISSN: 2321-0613, Volume 5, Issue 01, 1 st April 2017 | International |
| 29 | Melba D'Souza | Voice Operated Fire Extinguisher Robot | International Journal for Scientific Research and Development, Volume 4, Issue 11, Jan 2017, ISSN[ONLINE]: 23210613 | International |
| 30 | Melba D'Souza | Voice Recognition System | Board of Journal for Research, Volume 3, Issue 1, March 2017, ISSN: 2395-7549 | International |
| 31 | Melba D'Souza | Modified Solar Grass Cutter | International Journal for Scientific Research and Development, Volume 5, Issue 1, March 2017, ISSN (online): 2321 0613 | International |
| 32 | Melba D'Souza | Automized Solar Grass Cutter | International Journal of Science Technology and Engineering, Volume 3, Issue 7, January 2017, ISSN (online): 2349-784X | International |
| 33 | Yeshudas Muttu | Design of 12 – Sided Polygon Patch Micro strip Antenna for 2.4 GHz | International Journal for Innovative Research in Science & Technology (IJIRST) for Volume 3, Issue 12 | International |
| 34 | Yeshudas Muttu | Design & Analysis of Micro strip Patch Antenna & Comparison between the Arrays | International Journal for Innovative Research in Science & Technology (IJIRST) for Volume 3, Issue 12 | International |
| 35 | Yeshudas Muttu | Design of E – Shape Patch Antenna & its Array Using IE3D Software | International Journal for Innovative Research in Science & Technology (IJIRST) for Volume 3, Issue 12 | International |
| 36 | Yeshudas Muttu | Design of Compact Micro strip Patch Antenna for Wireless Applications | International Journal for Innovative Research in Science & Technology (IJIRST) for Volume 3, Issue 12 | International |
| 37 | Yeshudas Muttu | Design of 8 – shape slotted Micro strip Patch Antenna | International Journal for Research in Technological Studies (IJIRST) | International |
| 38 | Mohini Naik | Design and Simulation of Array of Rectangular Slotted Micro strip Patch Antenna with improved Bandwidth for WLAN | IEEE XPLORE | International |
| 39 | Mohini Naik | Design & Analysis of Micro strip Patch Antenna & Comparison between the Arrays | International Journal for Innovative Research in Science & Technology (IJIRST) for Volume 3, Issue 12 | International |
| 40 | Flavia Leitao | Intellectual Property (IP) Protection using Watermarking and Fingerprinting | IEEE XPLORE | International |

| | | | | |
|--|--|------------|--|--|
| | | Techniques | | |
|--|--|------------|--|--|

xii) Text Books/Monographs published-
Nil

- xiii) Patents/Awards received-**
- Michelle Araujo e Viegas received the prestigious Devang Mehta National Education Award for the Best Professor in Electronics & Telecommunication Engineering on 16 August 2017 in Goa
 - Deron Rodrigues appeared in the top 5% having a consolidated score of 75% marks in the NPTEL Online Certification exam held on 25 March 2017

xiv) Any special recognition received by the Department-
Nil

xv) Any financial assistance for projects received by the Department

| Project Title | Project Duration | Amount received | Funding Agency | Status Complete/Progress | No. of Faculty involved |
|----------------------|------------------|-----------------|--------------------------------|--------------------------|-------------------------|
| Waste Sorter Machine | One Year | Rs. 15,000/- | V. M Salgaocar & Bro Pvt. Ltd. | Complete | 1 |

xvi) Details of department faculty participating in interdepartmental activities

| Name of the faculty | Dept. in which participating | Courses | Nature of Participation | |
|---------------------------|------------------------------|--|-------------------------|----------------------|
| | | | Research Work | Consultancy/ Testing |
| Michelle Araujo e Viegas | Science & Humanities | Basic Electrical Engineering | - | - |
| | Mechanical Engineering | Digital Electronics and Microprocessor Application | - | - |
| Trima Fernandes e Fizardo | Science & Humanities | Basic Electrical Engineering | - | - |
| | Mechanical Engineering | Digital Electronics and Microprocessor Application | - | - |
| Samantha Cardoso | Science & Humanities | Basic Electrical Engineering | - | - |
| | Science & Humanities | Fundamental of Electronics and Telecommunication Engineering | - | - |
| | Computers Engineering | Electronic Measurements | - | - |
| Kimberly Moraes | Mechanical Engineering | Electrical Technology | - | - |
| | Science & Humanities | Basic Electrical Engineering | - | - |
| D. S. Vidhya | Computer Engineering | Digital Signal Processing | - | - |
| | Mechanical Engineering | Digital Electronics and Microprocessor Application | - | - |
| | Science & Humanities | Fundamental of Electronics and Telecommunication Engineering | - | - |
| Anisha Cotta | Mechanical Engineering | Digital Electronics and Microprocessor Application | - | - |
| | Science & Humanities | Basic Electrical Engineering | - | - |

| | | | | |
|------------------|------------------------|--|---|--------------|
| Deron Rodrigues | Mechanical Engineering | Digital Electronics and Microprocessor Application | - | - |
| | Mechanical Engineering | Digital Electronics and Microprocessor Application | - | - |
| Melba D'Souza | Science & Humanities | Basic Electrical Engineering | - | - |
| | Science & Humanities | Fundamental of Electronics and Telecommunication Engineering | - | - |
| Mathilda Colaco | Science & Humanities | Basic Electrical Engineering | - | - |
| | Science & Humanities | Fundamentals of Electrical Engineering | - | - |
| Flavia Leitao | Science & Humanities | Basic Electrical Engineering | - | - |
| | Science & Humanities | Fundamentals of Electrical Engineering | - | - |
| Selvyn Fernandes | Science & Humanities | Basic Electrical Engineering | - | - |
| Vishnu Rathod | Science & Humanities | Basic Electrical Engineering | - | DRDO Project |
| Mohini Naik | Mechanical Engineering | Electrical Technology | - | - |

xvii) Faculty members deputed for higher studies/specialized training

| Schemes | No. of faculty deputed for the last 3 years | | |
|--------------------------------|---|------|------|
| | 2015 | 2016 | 2017 |
| QIP/Study leave | Nil | Nil | Nil |
| Seminars/Workshops/Conferences | Nil | Nil | Nil |
| Summer/Winter Schools | Nil | Nil | Nil |
| Any other | Nil | Nil | Nil |

7.0. Departmental Laboratory Details

a) Laboratories

| Sr. No. | Name of the Lab | Available Floor Space (sq. m) | Maximum Batch Size | No. of Experiments | | Recurring Expenditure per year |
|---------|--|-------------------------------|--------------------|--------------------|-----------|--|
| | | | | Prescribed | Conducted | |
| 1 | Electronics Engineering | 57.6 | 21 | 21 | 8 | 16-17: Rs. 0 17-18: Rs. 45,293.00 |
| 2 | Power Electronics & Control System | 57.6 | 21 | 8 | 19 | 16-17: Rs. 0 17-18: Rs. 36,450.00 |
| 3 | Devices & Circuits | 57.6 | 21 | 8 | 13 | 16-17: Rs. 2,56,922.00 17-18: Rs. 3,07,812.00 |
| 4 | Digital Systems & Electronic Instrumentation Lab | 57.6 | 21 | 8 | 21 | 16-17: Rs. 0 17-18: Rs. 0 |
| 5 | Communication Engineering Lab | 57.6 | 21 | 8 | 20 | 16-17: Rs. 0 17-18: Rs. 0 |
| 6 | Microprocessor Lab | 57.6 | 21 | 8 | 22 | 16-17: Rs.0 17-18: Rs.0 |
| 7. | Basic Electrical Lab | 58.32 | 21 | 8 | 12 | 16-17: Rs.0 17-18: Rs. 1,11,767.00 |
| 8. | Electrical Technology Lab | 58.32 | 21 | 8 | 08 | 16-17: Rs. 0 17-18: Rs. 47,531.00 |
| 9. | Signal Processing Lab | 62.8 | 30 | 8 | 21 | 16-17: Rs. 0 17-18: Rs. 0 |
| 10. | Advanced Communication Lab | 46.01 | 25 | 8 | 17 | 16-17: Rs. 1,16,630.00 17-18: Rs. 0 |

b) Major Equipment in the Laboratories (Costing ≥ Rs. 50000/-)

| Sr. No | Equipment | | Purchase | | Installation | Present Condition | |
|--------|-------------------|-------|------------|-------------|-------------------------------|-------------------|-----------------|
| | Name | Make | Date | Cost (Rs) | | Working | Not working |
| 1. | Spectrum Analyser | Rigol | 11.02.2014 | 1,48,191.00 | Communication Engineering Lab | ----- | Sent For Repair |

8.0. Financial Statement

| Year | Total Budget (Rs) | | Budget for Major Equipment (Rs) | | Budget for Minor Equipment (Rs) | | Budget for Operation & Maintenance (Rs) | |
|---------|-------------------|-------------|---------------------------------|-------------|---------------------------------|-------------|---|-------|
| | Allocated | Spent | Allocated | Spent | Allocated | Spent | Allocated | Spent |
| 2017-18 | 32,55,000.00 | 4,90,000.00 | 2,84,9000.00 | 3,49,000.00 | 1,46,000.00 | 1,41,000.00 | 2,60,000.00 | |

9.0. Departmental Library

| Books | Journals | | CD, DVD, Multimedia | Any other |
|-------|----------|---------------|---------------------|-----------|
| | National | International | | |
| 279 | Nil | Nil | 27 | None |

10.0. Students

a) Number of students appeared/qualified in GATE/CAT/GRE/Central/State services through competitive examinations.

| Year | Nature of Exam | Number of Students | |
|---------|----------------|--------------------|-----------|
| | | Appeared | Qualified |
| 2016-17 | GATE | 51 | 1 |

11.0. Placement Record of the last three years

| Year | No. of Companies | No. of Students selected | Average Salary (lac) | Highest Salary offered (lac) |
|------|------------------|--------------------------|----------------------|------------------------------|
| 2017 | 13 | 36 | 2.32 | 6.50 |
| 2016 | 16 | 34 | 1.78 | 3.25 |
| 2015 | 14 | 26 | 1.88 | 3.25 |

12.0. Trainings

a) Is Industry Training compulsory for students in the department? If yes, mention duration.

Yes. Compulsory internship training is mandated for students in the Third and Final Year Students. The duration of the internship is for 4 weeks per student.

b) Number of students for whom training was arranged by Training & Placement Cell

| Year | No. of trainings arranged | No. of Students who attended the training |
|-----------|---------------------------|---|
| 2016-2017 | 13 | 70 |

c) Are there any training reports submitted by the students? If yes,

Yes

| Nature of Evaluation | Evaluation by | | | Not evaluated |
|----------------------|---------------|-------------|------------------------|---------------|
| | Industry | Institution | Industry + Institution | |
| Feedback Forms | √ | | | |

d) Are there student projects sponsored by the Industry? If yes, give details.

No

13.0. Industry Institute Interaction**a) Are there any external resource persons being invited for lectures and seminars?**

| Year | Name of the Resource Person | Background (Industry/R&D/Academic) | Topics covered |
|-----------|-----------------------------|------------------------------------|----------------|
| 2017-2018 | Sandeep Mone | Proprietor, Autotech, Mapusa | PLC & SCADA |
| 2017-2018 | Shramik Salgaonkar | Alumni | CAYENNE IOT |
| 2017-2018 | Zain Rajani | Alumni | VHDL |

14.0. Co-curricular Activities of the students**a) Inter-departmental Competitions**

| Nature of the Activity | No. of students enrolled | Recognitions/Awards received |
|------------------------|--------------------------|------------------------------|
| Nil | | |

b) Inter-institutional Competitions

| Nature of the Activity | No. of students enrolled | Recognitions/Awards received |
|--|--------------------------|------------------------------|
| Technovation 2016, State level Technical Extravaganza: Technical Projects Exhibition | 3 | Consolation Prize |
| Technovation 2016, State level Technical Extravaganza | 1 | Techno Princess Award |

15.0. Extra-curricular Activities of the students**a) Inter-departmental Competitions**

| Nature of the Activity | No. of students enrolled | Recognitions/Awards received |
|------------------------|--------------------------|------------------------------|
| Nil | | |

b) Inter-institutional Competitions

| Nature of the Activity | No. of students enrolled | Recognitions/Awards received |
|--|--------------------------|---|
| Student's Parliament Competition 2016 - Goa Legislature Secretariat | 01 | Best Parliamentarian Award |
| Indian Engineering Olympiad | 01 | First Rank |
| Indian Engineering Olympiad | 01 | Third Rank |
| National Level Certification Workshop - Innovation Think Tank, Siemens Healthcare, India | 01 | First Prize |
| All Goa Inter-Collegiate Patriotic Singing Competition - V V M's Shree Damodar College of Commerce and Economics | 04 | Second Prize in Group and Solo categories |
| Skit Competition - South Zonal Collectorate Office, Margao | 15 | First Place |
| Dance Competition - X-CarveV | 02 | First Place |
| Weight Lifting & Power Lifting - Goa University | 02 | Bronze Medal |
| Groovy Feat - Insight 2017 | 02 | Second Place |
| Cycling - Goa University | 03 | Bronze Medal |
| Swachh Bharat Drawing Competition - Upgrade | 01 | Third Place |

16.0. Alumni**a) Renowned alumni of the department with designation**

Nil

b) Are the Alumni contributing to the development of the department? Provide details

| Sr. No | Name Alumni | Graduation Year | Employed | | Higher Studies | | Contribution to the Department |
|--------|-------------------|-----------------|----------------------|--|-------------------|-----------------------|--|
| | | | Current Designation | Company Name | Name of programme | Name of University | |
| 1 | Preeti Jagdev | 2015 | Lecturer | Institute of Ship-Building Technology, Vasco | NA | NA | Provides continuous feedback through constant interactions with department faculty |
| 2 | Myron Rodrigues | 2016 | NA | NA | MSc Robotics | Bristol University | Conducted workshop on Robotics for students |
| 3 | Raquib Sharmadi | 2016 | Student | NA | PGPM | ICFAI Business School | Conducted workshop on Robotics for students |
| 4 | Cecilia D'Silva | 2016 | NA | NA | NA | NA | Conducted workshop on Robotics for students |
| 5 | Shramik Salgaokar | 2017 | Electronics Engineer | Design Intervention India Pvt Ltd | NA | NA | Conducted workshop on for students |
| 6 | Zain Rajani | 2017 | NA | NA | NA | NA | Conducted workshop for students |

17.0. Faculty Profile

| Sr. No. | Name | Qualification | Exp. (Years) | Designation | Area | Publication | |
|---------|-----------------------------------|---|--------------|---|---|-------------|------|
| | | | | | | Int. | Nat. |
| 1 | Michelle Araujo e Viegas | M.E (Electronics) | 12.6 years | Assistant Professor (Stage 2) In charge HOD | Wireless Communication, Digital Electronics, Network Analysis & Synthesis | 12 | 01 |
| 2 | Trima Piedade Fernandes e Fizardo | M.Tech (Digital Communication and Networking) | 11 years | Assistant Professor (Stage 2) | Microprocessors, Secure Communication, Wireless Communication | 03 | - |
| 3 | Kimberly Morais | M.E. (Electronics Communication and Instrumentation) | 07 years | Assistant Professor | Image Processing | 07 | |

| | | | | | | | |
|----|--------------------|---|--|---------------------|---|-----|---|
| 4 | Samantha Cardoso | M.E. (Microelectronics) | 5.5 years | Assistant Professor | VLSI, Embedded Systems | 04 | - |
| 5 | D. S. Vidhya | M Tech (VLSI and Embedded systems) Phd (pursuing) | 17 years | Assistant Professor | VLSI, Embedded Systems, Microprocessor Architecture, Image Processing | 04 | - |
| 6 | Anisha Cotta | ME (Electronic Communication and Instrumentation) | 10 years | Assistant Professor | VLSI, Biomedical Instrumentation | 07 | - |
| 7 | Melba Lira D'souza | M Tech (VLSI and Embedded systems) | 13.3 years | Assistant Professor | VLSI Embedded Systems, DSP, Microprocessors Integrated Electronics | 04 | - |
| 8 | Deron Rodrigues | ME (Electronic Communication and Instrumentation) | 3.5 years | Assistant Professor | Digital Communication, Embedded Systems, Satellite & T.V. Engineering | Nil | - |
| 9 | Selvyn Fernandes | ME (Industrial Automation and RF) | 6 years teaching 5 years Industry | Assistant Professor | Automation & Radio Frequency | Nil | - |
| 10 | Flavia Leitao | ME (Microelectronics) | 8.5 years teaching 5 years Industry | Assistant Professor | VLSI Design, Embedded Systems | 1 | - |
| 11 | Mathilda Colaco | ME (Electronic Communication and Instrumentation) | 3.5 years | Assistant Professor | Electronic Communication | Nil | - |
| 12 | Vishnu Rathod | M.Tech (Digital Communication Engineering) | 04 years | Assistant Professor | Digital Signal Processing, Analog Communication, Digital Communication | Nil | - |
| 13 | Yeshudas A. Muttu | M.E. (Electronic Communication and Instrumentation) | 02 Years | Assistant Professor | Biomedical Signal Processing, Digital & Analog Communication | 5 | - |
| 14 | Mohini Naik | M.E. (Electronic Communication and Instrumentation) Phd (pursuing) | 04 years | Assistant Professor | Electromagnetic Field & Waves, Transmission Lines & Theory | 2 | - |

18.0. Innovative Practices – Share any three best innovative practices of your department.

- Mock Viva before practical exams
- Mock Interviews for final year students
- Spoken Tutorials
- GATE coaching
- Fieldtrips
- Workshops