

## 1.2.2 Number of Add on /Certificate programs offered during the last five years (10)

| 2018-2019 |                                                                                |       |
|-----------|--------------------------------------------------------------------------------|-------|
| Sl. No    | Name of Add on /Certificate programs offered                                   | Pg.No |
| 1.        | <b>EC18191 - Introduction to Machine Learning with MATLAB</b>                  |       |
|           | Permission                                                                     | 2     |
|           | Circular                                                                       | 3     |
|           | Syllabus                                                                       | 4-5   |
|           | Willing Student List                                                           | 6-13  |
|           | Course Delivery                                                                | 14-15 |
|           | Resource Person Details                                                        | 16-17 |
|           | Attendance                                                                     | 18-27 |
|           | Question Paper                                                                 | 28-32 |
|           | One Page Report                                                                | 33    |
|           | Certificates                                                                   | 34-35 |
| 2.        | <b>EC18192 - Basic of Software Defined Radio and its Practical Application</b> |       |
|           | Permission                                                                     | 36    |
|           | Circular                                                                       | 37    |
|           | Syllabus                                                                       | 38-39 |
|           | Willing Student List                                                           | 40-47 |
|           | Course Delivery                                                                | 48-49 |
|           | Resource Person Details                                                        | 50-51 |
|           | Attendance                                                                     | 52-59 |
|           | Question Paper                                                                 | 60-63 |
|           | One Page Report                                                                | 64    |
|           | Certificates                                                                   | 65-66 |



## M.I.E.T. ENGINEERING COLLEGE

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)

TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.

Email: principalengg@miet.edu, contact@miet.edu

Website: - www.miet.edu

Ph: 0431 - 2680 303

Date: 04.06.2018

To

The Principal

M.I.E.T Engineering College,

Trichy - 620007

Respected Madam,

Sub: Permission to conduct the certificate program - Reg...

We have planned to conduct the certificate program for Second Year and Third year students from 18.6.2018 to 23.6.2018)

| Name of the Certificate Program              | Course Coordinator                           |
|----------------------------------------------|----------------------------------------------|
| Introduction to Machine Learning with Matlab | Ms.P.Delphine Mary Ap/ECE and N.Latha AP/ECE |

So kindly give us permission to conduct the course and to utilize the class room.

Thanking you

  
Course Coordinator

  
HoD/ECE

  
Principal

  
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Ph: 0431 - 2660 303

06.06.2018

### CIRCULAR

#### Sub: Certificate Program

It is planned to conduct the Certificate Program for the Second year and Third year Electronics and Communication Engineering students.

The Certificate Program are short term certificate courses which are designed and offered by our department for the benefit of our students. Certificate Program will be conducted at free of cost and based on the performance of the participated students, the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

| Name of the Certificate Program                                                  | Course Coordinator                               |
|----------------------------------------------------------------------------------|--------------------------------------------------|
| Introduction to Machine Learning with Matlab                                     | Ms.P.Delphine Mary Ap/ECE and Mrs.N.Latha AP/ECE |
| Commencement of course from 18.06.2018 to 22.06.2018<br>Time: 09.00 AM - 5.30 PM |                                                  |

Course Coordinator

IQAC Coordinator

HoD/ECE

Principal

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### Certificate Program (II Year /III Semester and III Year /IV Semester)

#### Course Syllabus

Name of the course : Introduction to Machine Learning with Matlab

Course Code: EC18191

Course Coordinator: Ms.P.Delphine Mary Ap/ECE & Mrs.N.Latha AP/ECE

Total hours:31

Academic Year:2018-2019

#### Objectives:

- To introduce students to the basic concepts and techniques of Machine Learning.
- To become familiar with regression methods, classification methods, clustering methods.
- To become familiar with support vector machine and Dimensionality reduction Techniques.

#### Unit-1 Introduction to Machine Learning

6

Introduction to Machine Learning – What is Machine Learning?, Key Terminology, Types of Machine Learning, Issues in Machine Learning, Application of Machine Learning, How to choose the right algorithm, Steps in developing a Machine Learning Application.

#### Unit-2 Regression&Trees

6

Learning with Regression – Linear Regression, Logistic Regression. Learning with trees – Using Decision Trees, Constructing Decision Trees, Classification and Regression Trees (CART).

#### Unit-3 Support Vector Machines

6

Support Vector Machines (SVM) –Maximum Margin Linear Separators, Quadratic Programming solution to finding maximum margin separators, Kernels for learning non-linear functions.

#### Unit-4 Classification&Dimensionality

6

Learning with Classification –Rule based classification, classification by back propagation, Bayesian Belief networks, Hidden Markov Models. Dimensionality Reduction –Dimensionality Reduction Techniques, Principal Component Analysis, Independent Component Analysis.

#### Unit-5 Clustering&Reinforcement Learning

7

Learning with Clustering –K-means clustering, Hierarchical clustering, Expectation Maximization Algorithm, Supervised learning after clustering, Radial Basis functions.Reinforcement Learning –Introduction, Elements of Reinforcement Learning, Model-based learning, Temporal Difference Learning, Generalization, Partially Observable States.

Total hours:31

  
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### Course Outcomes:

- Ability to analyze and appreciate the applications which can use Machine Learning Techniques.
- Ability to understand regression, classification, clustering methods.
- Ability to understand the difference between supervised and unsupervised learning methods.
- Ability to appreciate Dimensionality reduction Techniques.
- Students would understand the working of Reinforcement learning.

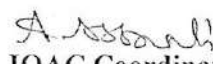
### Text Books:

1. Peter Harrington "Machine Learning In Action", DreamTech Press
2. Ethem Alpaydin, "Introduction to Machine Learning", MIT Press
3. Tom M. Mitchell "Machine Learning" McGraw Hill
4. Stephen Marsland, "Machine Learning An Algorithmic Perspective" CRC Press

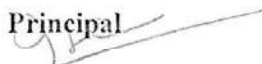
### Reference Books:

1. William W. Hsieh, "Machine Learning Methods in the Environmental Sciences", Cambridge
2. Han Kamber, "Data Mining Concepts and Techniques" Morgan Kaufmann Publishers
3. Margaret H. Dunham, "Data Mining Introductory and Advanced Topics", Pearson Education

  
Course Coordinator

  
IQAC Coordinator

  
HoD/ECE

  
Principal

  
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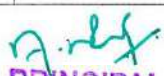
### Willing Student list

CP1 Coordinator: Ms.P.Delphine Mary Ap/ECE and Mrs.N.Latha AP/ECE

CP2 Coordinator: Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE

Academic Year: 2018-2019

| SL. NO | STUDENT NAME        | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|---------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1.     | Aabitha Begam. S    | ✓                                                                |                                                                                   |
| 2.     | Abdul Ajceez. A     | ✓                                                                |                                                                                   |
| 3.     | Abdul Rahman. M     | ✓                                                                |                                                                                   |
| 4.     | Afsana. A           | ✓                                                                |                                                                                   |
| 5.     | Ahamed Aakif. Z     | ✓                                                                |                                                                                   |
| 6.     | Akash. S            | ✓                                                                |                                                                                   |
| 7.     | Akshaya. M          | ✓                                                                |                                                                                   |
| 8.     | Ammu. P             | ✓                                                                |                                                                                   |
| 9.     | Ammu. S             | ✓                                                                |                                                                                   |
| 10.    | Annal Jebaseeli-. D | ✓                                                                |                                                                                   |
| 11.    | Antony Jero. J      | ✓                                                                |                                                                                   |
| 12.    | Arthi. J            | ✓                                                                |                                                                                   |
| 13.    | Asrath Nisha. S     | ✓                                                                |                                                                                   |
| 14.    | Boomika. P          | ✓                                                                |                                                                                   |
| 15.    | Chaandhini. C       | ✓                                                                |                                                                                   |
| 16.    | Daniel Vinith. G    | ✓                                                                |                                                                                   |
| 17.    | Defi Christina. C   | ✓                                                                |                                                                                   |

  
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| SL. NO | STUDENT NAME           | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 18.    | Deiva Rani. M          | ✓                                                                |                                                                                   |
| 19.    | Fazil Mohammed. B      | ✓                                                                |                                                                                   |
| 20.    | Gayathri. K            |                                                                  |                                                                                   |
| 21.    | Harini. P              | ✓                                                                |                                                                                   |
| 22.    | Hasiba Banu. H         | ✓                                                                |                                                                                   |
| 23.    | Hina. M                | ✓                                                                |                                                                                   |
| 24.    | Janani. M              | ✓                                                                |                                                                                   |
| 25.    | Jansirani. K           | ✓                                                                |                                                                                   |
| 26.    | Jasmine. E             |                                                                  |                                                                                   |
| 27.    | Karan. M               |                                                                  |                                                                                   |
| 28.    | Kavitha. M             |                                                                  |                                                                                   |
| 29.    | Kowsalya. K            |                                                                  |                                                                                   |
| 30.    | Krishnapriya. K        |                                                                  |                                                                                   |
| 31.    | Manikandan. T          |                                                                  |                                                                                   |
| 32.    | Mathina Beevi. S       |                                                                  |                                                                                   |
| 33.    | Mohamed Rizvanudeen. M | ✓                                                                |                                                                                   |
| 34.    | Mohamed Suwaidee. M    | ✓                                                                |                                                                                   |
| 35.    | Mohamed Ibrahim. M     | ✓                                                                |                                                                                   |
| 36.    | Niranjani. B           |                                                                  |                                                                                   |
| 37.    | Nithiksha. N           |                                                                  |                                                                                   |
| 38.    | Nithish Kumar. S       | ✓                                                                |                                                                                   |
| 39.    | Pavithra. C            | ✓                                                                |                                                                                   |
| 40.    | Puvanithy. M           | ✓                                                                |                                                                                   |

  
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| SL. NO | STUDENT NAME       | CP1<br>Introduction to<br>Machine Learning<br>with Matlab | CP2<br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|--------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 41.    | Rizvana Begam. T   | ✓                                                         |                                                                            |
| 42.    | Sabarinath. C      | ✓                                                         |                                                                            |
| 43.    | Sabitha. S         | ✓                                                         |                                                                            |
| 44.    | Safa Almaz. MS     | ✓                                                         |                                                                            |
| 45.    | Sathiya Sheela. S  | ✓                                                         |                                                                            |
| 46.    | Selciya. M         |                                                           |                                                                            |
| 47.    | Shakthivel. A      |                                                           |                                                                            |
| 48.    | Shalini. B         |                                                           |                                                                            |
| 49.    | Suruthi. M         |                                                           |                                                                            |
| 50.    | Tamil Mani. B      |                                                           |                                                                            |
| 51.    | Thajudeen. T       |                                                           |                                                                            |
| 52.    | Thilsara. S        |                                                           |                                                                            |
| 53.    | Vengatesh Kumar. M |                                                           |                                                                            |
| 54.    | Vigneshwaran. M    | ✓                                                         |                                                                            |
| 55.    | Vimal Athithan. M  | ✓                                                         |                                                                            |
| 56.    | Yogapriya. S       | ✓                                                         |                                                                            |
| 57.    | Zam Zam Haliya. A  | ✓                                                         |                                                                            |
| 58.    | Nisha Shalini. K   | ✓                                                         |                                                                            |
| 59.    | Deepa. A           | ✓                                                         |                                                                            |
| 60.    | Hari Vijay. R      | ✓                                                         |                                                                            |
| 61.    | Kiruthigha. K      |                                                           |                                                                            |
| 62.    | Monica. J          | ✓                                                         |                                                                            |
| 63.    | Vetriselvi. A      |                                                           |                                                                            |

  
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|--------|-----------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 64.    | Aarthi. N             | ✓                                                         |                                                                            |
| 65.    | Abarna. N             | ✓                                                         |                                                                            |
| 66.    | Abdul Malik. T        | ✓                                                         |                                                                            |
| 67.    | Ameer Sultan. J       | ✓                                                         |                                                                            |
| 68.    | Ashik Mohamed. A      | ✓                                                         |                                                                            |
| 69.    | Asrin Jaswani. S      | ✓                                                         |                                                                            |
| 70.    | Bhuvaneswari. S       | ✓                                                         |                                                                            |
| 71.    | Gayathri Vani. A      |                                                           | ✓                                                                          |
| 72.    | Guna Sunthari. B      |                                                           | ✓                                                                          |
| 73.    | Hari Haran. R         |                                                           | ✓                                                                          |
| 74.    | Lavanya. P            | ✓                                                         |                                                                            |
| 75.    | Madhumitha. C         | ✓                                                         |                                                                            |
| 76.    | Mohamed Faisal. S     | ✓                                                         |                                                                            |
| 77.    | Mohamed Imran. M      | ✓                                                         |                                                                            |
| 78.    | Mohamed Rafik. M      | ✓                                                         |                                                                            |
| 79.    | Mohamed Riaz. A       | ✓                                                         |                                                                            |
| 80.    | Mohamed Rizwan. B     | ✓                                                         |                                                                            |
| 81.    | Mohamed Sirajudeen. S | ✓                                                         |                                                                            |
| 82.    | Muhammed Azarudeen. J | ✓                                                         |                                                                            |
| 83.    | Muthulakshmi. M       | ✓                                                         |                                                                            |
| 84.    | Muthulakshmi. S       | ✓                                                         |                                                                            |
| 85.    | Pavithra Devi. P      | ✓                                                         |                                                                            |
| 86.    | Pearly. J             | ✓                                                         |                                                                            |

  
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| SL. NO | STUDENT NAME       | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|--------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 87.    | Racisa. A          | ✓                                                                |                                                                                   |
| 88.    | Rifansiya. S       | ✓                                                                |                                                                                   |
| 89.    | Shabhan. R         |                                                                  | ✓                                                                                 |
| 90.    | Souban Mohamed. S  |                                                                  | ✓                                                                                 |
| 91.    | Suguna. S          | ✓                                                                |                                                                                   |
| 92.    | Surendhar. B       | ✓                                                                |                                                                                   |
| 93.    | Syed Sadham. N     | ✓                                                                |                                                                                   |
| 94.    | Thaslima Afrin. S  |                                                                  | ✓                                                                                 |
| 95.    | Vishnu Priya. N.J  |                                                                  | ✓                                                                                 |
| 96.    | Viveka. K          |                                                                  | ✓                                                                                 |
| 97.    | Fayaz Ahamed. A    |                                                                  | ✓                                                                                 |
| 98.    | Haribaskar. S      |                                                                  | ✓                                                                                 |
| 99.    | Janani. R          |                                                                  | ✓                                                                                 |
| 100.   | Mohamed Ishan. M   | ✓                                                                |                                                                                   |
| 101.   | Mohamed Rayan. A.S | ✓                                                                |                                                                                   |
| 102.   | Mohana Sundari. P  | ✓                                                                |                                                                                   |
| 103.   | Vishnuvarthan. N   |                                                                  |                                                                                   |
| 104.   | Asha Victoria. A   |                                                                  | ✓                                                                                 |
| 105.   | Bakkia Priya. M    |                                                                  | ✓                                                                                 |
| 106.   | Baranidharan. S    |                                                                  | ✓                                                                                 |
| 107.   | Catherine. V       |                                                                  | ✓                                                                                 |
| 108.   | Dayana. T          |                                                                  | ✓                                                                                 |
| 109.   | Deepika. S         |                                                                  | ✓                                                                                 |

  
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| SL. NO | STUDENT NAME                | CP1<br>Introduction to<br>Machine Learning<br>with Matlab | CP2<br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|-----------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 110.   | Denil Desosa. J             |                                                           | ✓                                                                          |
| 111.   | Fathima. L                  |                                                           | ✓                                                                          |
| 112.   | Ghousia Shimacem. A         |                                                           | ✓                                                                          |
| 113.   | Hema. R                     |                                                           |                                                                            |
| 114.   | Hisham. S                   |                                                           |                                                                            |
| 115.   | Iyyappan. S                 |                                                           |                                                                            |
| 116.   | Janapriya. S                |                                                           | ✓                                                                          |
| 117.   | Joshua Francis. B           |                                                           | ✓                                                                          |
| 118.   | Keerthana. A                |                                                           | ✓                                                                          |
| 119.   | Kousalya. M                 |                                                           |                                                                            |
| 120.   | Madhumathi. R               |                                                           | ✓                                                                          |
| 121.   | Mahariba. M                 |                                                           | ✓                                                                          |
| 122.   | Malathy. R                  |                                                           | ✓                                                                          |
| 123.   | Manimegalai. M              |                                                           | ✓                                                                          |
| 124.   | Manisha. R                  |                                                           | ✓                                                                          |
| 125.   | Mathavi. K                  |                                                           |                                                                            |
| 126.   | Merlin Sybila. S            |                                                           |                                                                            |
| 127.   | Mohamed Matharsha. S        |                                                           | ✓                                                                          |
| 128.   | Mohamed Thowfeek Faruk. T.Z |                                                           |                                                                            |
| 129.   | Nabeez Ahamed. J            |                                                           |                                                                            |
| 130.   | Nagarjun. D                 |                                                           | ✓                                                                          |
| 131.   | Nasreen Banu. N             |                                                           | ✓                                                                          |
| 132.   | Nithiyanantham. G           |                                                           |                                                                            |

  
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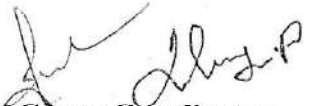
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| SL. NO | STUDENT NAME              | CP1<br>Introduction to<br>Machine Learning<br>with Matlab | CP2<br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|---------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 133.   | Preethi. S                |                                                           |                                                                            |
| 134.   | Prithivi. V               |                                                           | ✓                                                                          |
| 135.   | Priyadharshini. A         |                                                           | ✓                                                                          |
| 136.   | Pruthika. S               |                                                           | ✓                                                                          |
| 137.   | Ramya. B                  |                                                           | ✓                                                                          |
| 138.   | Rasika. A                 |                                                           | ✓                                                                          |
| 139.   | Roslin Shalini. J         |                                                           | ✓                                                                          |
| 140.   | Saranya. S                |                                                           | ✓                                                                          |
| 141.   | Sheik Abdul Kathar. I     |                                                           | ✓                                                                          |
| 142.   | Shirazunnisha. S.S        |                                                           | ✓                                                                          |
| 143.   | Siva. P                   |                                                           | ✓                                                                          |
| 144.   | Sornaprabhu. B            |                                                           | ✓                                                                          |
| 145.   | Swathika. A               |                                                           | ✓                                                                          |
| 146.   | Swathika. V               |                                                           | ✓                                                                          |
| 147.   | Tabassum Siddiqua. T      |                                                           | ✓                                                                          |
| 148.   | Thakira. J                |                                                           | ✓                                                                          |
| 149.   | Tharanya. V               |                                                           | ✓                                                                          |
| 150.   | Thasneem Banu. M          |                                                           | ✓                                                                          |
| 151.   | Vennila. B                |                                                           | ✓                                                                          |
| 152.   | Yoga. P                   |                                                           | ✓                                                                          |
| 153.   | Yogalakshmi. P            |                                                           | ✓                                                                          |
| 154.   | Antony Santhosh Raj. Y. Y |                                                           | ✓                                                                          |
| 155.   | Beaulah Kirubavathy. B    |                                                           | ✓                                                                          |

  
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| SL. NO | STUDENT NAME               | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|----------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 156.   | Karthika. M                |                                                                  | ✓                                                                                 |
| 157.   | Mahadir Mohamed. M         |                                                                  | ✓                                                                                 |
| 158.   | Mary Ezhil Arasi. R        |                                                                  | ✓                                                                                 |
| 159.   | Mohamed Nasurudeen. K      |                                                                  | ✓                                                                                 |
| 160.   | Praveen Kumar. B           |                                                                  | ✓                                                                                 |
| 161.   | Revathibalasathiyavathi. B |                                                                  | ✓                                                                                 |
| 162.   | Subashini. V               |                                                                  |                                                                                   |
| 163.   | Yogeshwaran.M. M           |                                                                  |                                                                                   |

  
Course Coordinator

  
HoD/ECE

  
Principal

  
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## Certificate Program (II Year /III Semester and III Year /IV Semester)

### Program Schedule

Name of the Course: Introduction to Machine Learning with Matlab

Course Code: EC18191

Course Coordinator: Ms.P.Delphine Mary Ap/ECE & Mrs.N.Latha AP/ECE

Total Hours: 31

Academic Year: 2018-2019

| Sl.No | Topics to be Covered                                         | Hours | Date of Delivery |
|-------|--------------------------------------------------------------|-------|------------------|
| 1.    | Introduction to Machine Learning                             | 6     | 18.06.2018       |
| 2.    | What is Machine Learning, Key Terminology                    |       |                  |
| 3.    | Types of Machine Learning,                                   |       |                  |
| 4.    | Issues in Machine Learning, Application of Machine Learning  |       |                  |
| 5.    | How to choose the right algorithm                            |       |                  |
| 6.    | Steps in developing a Machine Learning Application           |       |                  |
| 7.    | Regression&Trees                                             | 6     | 19.06.2018       |
| 8.    | Learning with Regression                                     |       |                  |
| 9.    | Linear Regression, Logistic Regression                       |       |                  |
| 10.   | Learning with trees                                          |       |                  |
| 11.   | Using Decision Trees, Constructing Decision Trees            |       |                  |
| 12.   | Classification and Regression Trees (CART).                  |       |                  |
| 13.   | Support Vector Machines                                      | 6     | 20.06.2018       |
| 14.   | Maximum Margin Linear Separators                             |       |                  |
| 15.   | Quadratic Programming solution                               |       |                  |
| 16.   | Quadratic Programming solution to find the linear Separator  |       |                  |
| 17.   | Finding maximum margin separators                            |       |                  |
| 18.   | Kernels for learning non-linear functions                    |       |                  |
| 19.   | Classification & Dimensionality                              | 6     | 21.06.2018       |
| 20.   | Learning with Classification -Rule based classification      |       |                  |
| 21.   | classification by back propagation, Bayesian Belief networks |       |                  |
| 22.   | Hidden Markov Models, Dimensionality Reduction               |       |                  |
| 23.   | Dimensionality Reduction Techniques,                         |       |                  |

  
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| Sl.No | Topics to be Covered                                                     | Hours | Date of Delivery |
|-------|--------------------------------------------------------------------------|-------|------------------|
| 24.   | Principal Component Analysis, Independent Component Analysis             |       |                  |
| 25.   | Learning with Clustering -K-means clustering, Hierarchic clustering      | 7     | 22.06.2018       |
| 26.   | Expectation Maximization Algorithm                                       |       |                  |
| 27.   | Supervised learning after clustering                                     |       |                  |
| 28.   | Radial Basis functions.Reinforcement Learning                            |       |                  |
| 29.   | Introduction, Elements of Reinforcement Learning                         |       |                  |
| 30.   | Model-based learning                                                     |       |                  |
| 31.   | Temporal Difference Learning, Generalization, Partially Observab States. |       |                  |

  
Course Coordinator

  
HoD/ECE

  
Principal

  
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TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.

Email: principalengg@miet.edu, contact@miet.edu

Website: - www.miet.edu

Ph: 0431 - 2660 303

## Resource Person Details

|                                    |                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title of the program               | Introduction to Machine Learning with Matlab                                                                                                                                                                                                                                                                                    |
| Course Code                        | EC18191                                                                                                                                                                                                                                                                                                                         |
| Duration and timing of the program | 31 Hrs, 09.00AM - 05.30 PM                                                                                                                                                                                                                                                                                                      |
| Name of the resource person        | Ms.P.Delphine Mary Ap/ECE                                                                                                                                                                                                                                                                                                       |
| Photo of the resource person       |                                                                                                                                                                                                                                               |
| Email address                      | delphine@miet.edu                                                                                                                                                                                                                                                                                                               |
| Contact number                     | 9791562423                                                                                                                                                                                                                                                                                                                      |
| Designation                        | Assistant Professor                                                                                                                                                                                                                                                                                                             |
| Educational qualification          | <ul style="list-style-type: none"> <li>➤ B.E -Electronics and Communication Engineering 2001 in JJ College of Engineering and Technology (Anna University), Chennai, Tamil Nadu, with 72.34%.</li> <li>➤ M.E -Communication System 2013 in Oxford Engg College, affiliated to Anna University Chennai with CGPA 8.28</li> </ul> |
| Experience                         | <ul style="list-style-type: none"> <li>➤ Teaching Experience - 10 Years.</li> </ul>                                                                                                                                                                                                                                             |

  
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|                                    |                                                                                                                                                                                                                                                                                                                   |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title of the program               | Introduction to Machine Learning with Matlab                                                                                                                                                                                                                                                                      |
| Course Code                        | ECI8191                                                                                                                                                                                                                                                                                                           |
| Duration and timing of the program | 31 Hrs, 09.00AM - 05.30 PM                                                                                                                                                                                                                                                                                        |
| Name of the resource person        | Mrs.N.Latha AP/ECE                                                                                                                                                                                                                                                                                                |
| Photo of the resource person       |                                                                                                                                                                                                                                 |
| Email address                      | Latha.n@miet.edu                                                                                                                                                                                                                                                                                                  |
| Contact number                     | 9629153633                                                                                                                                                                                                                                                                                                        |
| Designation                        | Assistant Professor                                                                                                                                                                                                                                                                                               |
| Educational qualification          | <ul style="list-style-type: none"> <li>➤ B.E -Electronics and Communication Engineering 2006 in RMK College of Engineering (Anna University), Chennai, Tamil Nadu, with 82%.</li> <li>➤ M.E -VLSI DESIGN (2010-2012july) in Oxford Engg College, affiliated to Anna University Chennai with CGPA 8.03.</li> </ul> |
| Experience                         | ➤ Teaching Experience - 9 Years.                                                                                                                                                                                                                                                                                  |

  
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Ph: 0431 - 2660 303

## Certificate Course (II Year /III semester and III Year/V Semester)

### Attendance Sheet

Name of the course: Introduction to Machine Learning with Matlab

Course code: EC19201

Course coordinator: Ms.P.Delphine Mary Ap/ECE and Mrs.N.Latha AP/ECE

Academic Year: 2018-19

| SL.NO | ROLL NO  | STUDENT NAME        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|-------|----------|---------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1.    | E1174001 | Aabitha Begam. S    | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 2.    | E1174004 | Abdul Ajeez. A      | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 3.    | E1174005 | Abdul Rahman. M     | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 4.    | E1174007 | Afsana. A           | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 5.    | E1174008 | Ahamed Aakif. Z     | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 6.    | E1174009 | Akash. S            | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  |
| 7.    | E1174010 | Akshaya. M          | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 8.    | E1174011 | Ammu. P             | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 9.    | E1174012 | Ammu. S             | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 10.   | E1174013 | Annal Jebaseeli-. D | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 11.   | E1174014 | Antony Jero. J      | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 12.   | E1174015 | Arthi. J            | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  |

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| SL.NO | ROLL NO  | STUDENT NAME           | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|-------|----------|------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 13.   | E1174016 | Asrath Nisha. S        | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 14.   | E1174018 | Boomika. P             | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 15.   | E1174019 | Chaandhini. C          | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 16.   | E1174020 | Daniel Vinith. G       | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 17.   | E1174021 | Defi Christina. C      | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 18.   | E1174022 | Deiva Rani. M          | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 19.   | E1174023 | Fazil Mohammed. B      | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 20.   | E1174025 | Harini. P              | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 21.   | E1174026 | Hasiba Banu. H         | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 22.   | E1174027 | Hina. M                | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 23.   | E1174028 | Janani. M              | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  |
| 24.   | E1174029 | Jansirani. K           | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 25.   | E1174039 | Mohamed Rizvanudeen. M | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 26.   | E1174040 | Mohamed Suwaidee. M    | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 27.   | E1174041 | Mohamed Ibrahim. M     | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 28.   | E1174045 | Nithish Kumar. S       | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 29.   | E1174046 | Pavithra. C            | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  |
| 30.   | E1174047 | Puvanithy. M           | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

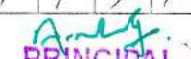
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| SL.NO | ROLL NO  | STUDENT NAME      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|-------|----------|-------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 31.   | E1174049 | Rizvana Begam. T  | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 32.   | E1174050 | Sabarinath. C     | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 33.   | E1174051 | Sabitha. S        | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 34.   | E1174052 | Safa Almaz. MS    | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 35.   | E1174053 | Sathiya Sheela. S | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 36.   | E1174063 | Vigneshwaran. M   | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 37.   | E1174064 | Vimal Athithan. M | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 38.   | E1174066 | Yogapriya. S      | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 39.   | E1174067 | Zam Zam Haliya. A | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 40.   | E3174075 | Nisha Shalini. K  | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 41.   | E2184068 | Deepa. A          | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 42.   | E2184069 | Hari Vijay. R     | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 43.   | E2184072 | Monica. J         | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 44.   | E1164001 | Aarthi. N         | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 45.   | E1164002 | Abarna. N         | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 46.   | E1164003 | Abdul Malik. T    | a | a | a | a | a | a | a | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 47.   | E1164004 | Ameer Sultan. J   | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  |
| 48.   | E1164005 | Ashik Mohamed. A  | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

  
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| SL.NO | ROLL NO  | STUDENT NAME          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|-------|----------|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 49.   | E1164006 | Asrin Jaswani. S      | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 50.   | E1164007 | Bhuvaneswari. S       | a | a | a | a | a | a | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 51.   | E1164014 | Lavanya. P            | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 52.   | E1164015 | Madhumitha. C         | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 53.   | E1164016 | Mohamed Faisal. S     | a | a | a | a | a | a | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 54.   | E1164017 | Mohamed Imran. M      | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 55.   | E1164018 | Mohamed Rafik. M      | a | a | a | a | a | a | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 56.   | E1164019 | Mohamed Riaz. A       | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 57.   | E1164020 | Mohamed Rizwan. B     | a | a | a | a | a | a | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 58.   | E1164021 | Mohamed Sirajudeen. S | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  |
| 59.   | E1164022 | Muhammed Azarudeen. J | a | a | a | a | a | a | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 60.   | E1164023 | Muthulakshmi. M       | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 61.   | E1164024 | Muthulakshmi. S       | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 62.   | E1164025 | Pavithra Devi. P      | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 63.   | E1164026 | Pearly. J             | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 64.   | E1164029 | Racisa. A             | a | a | a | a | a | a | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 65.   | E1164031 | Rifansiya. S          | / | / | / | / | / | / | / | a | a | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  |
| 66.   | E1164034 | Suguna. S             | / | / | / | / | / | / | / | / | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

  
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|------------------------------|----------|--------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 67.                          | E1164035 | Surendhar. B       | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 68.                          | E1164036 | Syed Sadham. N     | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  |
| 69.                          | E2174046 | Mohamed Ishan. M   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 70.                          | E2174047 | Mohamed Rayan. A.S | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 71.                          | E2174048 | Mohana Sunderi. P  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| Total No Students Presents   |          |                    | 52 | 46 | 48 | 50 | 52 | 59 | 47 | 58 | 49 | 58 | 47 | 54 | 46 | 49 | 48 | 56 | 53 | 49 | 53 | 48 |
| Total No Students Absent     |          |                    | 19 | 25 | 23 | 17 | 14 | 12 | 24 | 14 | 22 | 23 | 24 | 17 | 25 | 22 | 23 | 25 | 28 | 23 | 28 | 23 |
| Signature Course Coordinator |          |                    | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  | f  |

  
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| SL.NO | ROLL NO  | STUDENT NAME        | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|-------|----------|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | E1174001 | Aabitha Begam. S    | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 2.    | E1174004 | Abdul Ajeez. A      | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 3.    | E1174005 | Abdul Rahman. M     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 4.    | E1174007 | Afsana. A           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 5.    | E1174008 | Ahamed Aakif. Z     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 6.    | E1174009 | Akash. S            | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 7.    | E1174010 | Akshaya. M          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 8.    | E1174011 | Ammu. P             | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 9.    | E1174012 | Ammu. S             | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 10.   | E1174013 | Annal Jebaseeli-. D | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 11.   | E1174014 | Antony Jero. J      | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 12.   | E1174015 | Arthi. J            | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 13.   | E1174016 | Asrath Nisha. S     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 14.   | E1174018 | Boomika. P          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 15.   | E1174019 | Chaandhini. C       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 16.   | E1174020 | Daniel Vinith. G    | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 17.   | E1174021 | Defi Christina. C   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

  
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| SL.NO | ROLL NO  | STUDENT NAME           | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|-------|----------|------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18.   | E1174022 | Deiva Rani. M          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 19.   | E1174023 | Fazil Mohammed. B      | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 20.   | E1174025 | Harini. P              | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 21.   | E1174026 | Hasiba Banu. H         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 22.   | E1174027 | Hina. M                | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 23.   | E1174028 | Janani. M              | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 24.   | E1174029 | Jansirani. K           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 25.   | E1174039 | Mohamed Rizvanudeen. M | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 26.   | E1174040 | Mohamed Suwaidee. M    | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 27.   | E1174041 | Mohamed Ibrahim. M     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 28.   | E1174045 | Nithish Kumar. S       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 29.   | E1174046 | Pavithra. C            | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 30.   | E1174047 | Puvanithy. M.          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 31.   | E1174049 | Rizvana Begam. T       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 32.   | E1174050 | Sabarinath. C          | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 33.   | E1174051 | Sabitha. S             | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 34.   | E1174052 | Safa Almaz. MS         | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |

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|-------|----------|-------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 35.   | E1174053 | Sathiya Sheela. S | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 36.   | E1174063 | Vigneshwaran. M   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 37.   | E1174064 | Vimal Athithan. M | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 38.   | E1174066 | Yogapriya. S      | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 39.   | E1174067 | Zam Zam Haliya. A | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 40.   | E3174075 | Nisha Shalini. K  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 41.   | E2184068 | Deepa. A          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 42.   | E2184069 | Hari Vijay. R     | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 43.   | E2184072 | Monica. J         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 44.   | E1164001 | Aarthi. N         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 45.   | E1164002 | Abarna. N         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 46.   | E1164003 | Abdul Malik. T    | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 47.   | E1164004 | Ameer Sultan. J   | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 48.   | E1164005 | Ashik Mohamed. A  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 49.   | E1164006 | Asrin Jaswani. S  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 50.   | E1164007 | Bhuvaneswari. S   | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 51.   | E1164014 | Lavanya. P        | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 52.   | E1164015 | Madhumitha. C     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

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|-------|----------|-----------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 53.   | E1164016 | Mohamed Faisal. S     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 54.   | E1164017 | Mohamed Imran. M      | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 55.   | E1164018 | Mohamed Rafik. M      | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 56.   | E1164019 | Mohamed Riaz. A       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 57.   | E1164020 | Mohamed Rizwan. B     | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 58.   | E1164021 | Mohamed Sirajudeen. S | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 59.   | E1164022 | Muhammed Azarudeen. J | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 60.   | E1164023 | Muthulakshmi. M       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 61.   | E1164024 | Muthulakshmi. S       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 62.   | E1164025 | Pavithra Devi. P      | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 63.   | E1164026 | Pearly. J             | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 64.   | E1164029 | Raeisa. A             | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 65.   | E1164031 | Rifansiya. S          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 66.   | E1164034 | Suguna. S             | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 67.   | E1164035 | Surendhar. B          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 68.   | E1164036 | Syed Sadham. N        | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 69.   | E2174046 | Mohamed Ishan. M      | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 70.   | E2174047 | Mohamed Rayan. A.S    | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

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| SL.NO                        | ROLL NO  | STUDENT NAME      | 21                 | 22                 | 23                 | 24                 | 25                 | 26                 | 27                 | 28                 | 29                 | 30                 | 31                 | 32                 | 33                 | 34                 | 35                 |
|------------------------------|----------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 71.                          | E2174048 | Mohana Sundari. P | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  | /                  |
| Total No Students Presents   |          |                   | 61                 | 61                 | 61                 | 61                 | 61                 | 61                 | 55                 | 55                 | 55                 | 55                 | 55                 | 55                 | 63                 | 63                 | 63                 |
| Total No Students Absent     |          |                   | 10                 | 10                 | 10                 | 10                 | 10                 | 10                 | 12                 | 12                 | 12                 | 12                 | 12                 | 22                 | 8                  | 8                  | 8                  |
| Signature Course Coordinator |          |                   | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> | <i>[Signature]</i> |

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Course Coordinator

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HoD/ECE

*[Signature]*  
Principal

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Website: - www.miet.edu

Ph: 0431 - 2660 303

### Certificate Program Assessment Test

Name of the course: Introduction to Machine Learning with Matlab  
Course Code: EC18191  
Academic Year: 2018-2019

Date: 23.06.2018  
Time: 01:30 hrs

1. What is Machine learning?
  - a) The autonomous acquisition of knowledge through the use of computer programs
  - b) The autonomous acquisition of knowledge through the use of manual programs
  - c) The selective acquisition of knowledge through the use of computer programs
  - d) The selective acquisition of knowledge through the use of manual programs
2. Which of the factors affect the performance of learner system does not include?
  - a) Representation scheme used
  - b) Training scenario
  - c) Type of feedback
  - d) Good data structures
3. What is the sample standard deviation for the accuracies?
  - (a) 0.0243
  - (b) 0.0256
  - (c) 6.5444e-04
  - (d) 5.8900e-04
4. I have sampled 20 points from an unknown probability distribution. The sample mean is 5.0 and the standard deviation of the sample is 2.3. Estimate a 95% confidence interval for the mean of the distribution. (You might need to round your answer a little bit to agree with the right option. You can use the t-table available here)
  - (a) (4.53, 5.4703)
  - (b) (3.948, 6.0517)
  - (c) (3.923, 6.076)

  
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(d) None of the above

5. Which of the following constitute Type I errors?

- (a) the null hypothesis is rejected when it is true.
- (b) the null hypothesis is accepted when it is false.
- (c) the null hypothesis is accepted when it is true.
- (d) the alternate hypothesis is accepted when it is true.

6. Different learning methods does not include?

- a) Memorization
- b) Analogy
- c) Deduction
- d) Introduction

7. In language understanding, the levels of knowledge that does not include?

- a) Phonological
- b) Syntactic
- c) Empirical
- d) Logical

8. A model of language consists of the categories which does not include?

- a) Language units
- b) Role structure of units
- c) System constraints
- d) Structural units

9. What is a top-down parser?

- a) Begins by hypothesizing a sentence (the symbol S) and successively predicting lower level constituents until individual preterminal symbols are written
- b) Begins by hypothesizing a sentence (the symbol S) and successively predicting upper level constituents until individual preterminal symbols are written
- c) Begins by hypothesizing lower level constituents and successively predicting a sentence (the symbol S)

  
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d) Begins by hypothesizing upper level constituents and successively predicting a sentence (the symbol S)

10. Among the following which is not a horn clause?

a)  $p$

b)  $\emptyset p \vee q$

c)  $p \rightarrow q$

d)  $p \rightarrow \emptyset q$

11. The action 'STACK(A, B)' of a robot arm specify to \_\_\_\_\_

a) Place block B on Block A

b) Place blocks A, B on the table in that order

c) Place blocks B, A on the table in that order

d) Place block A on block B

12. Which of the following is a widely used and effective machine learning algorithm based on the idea of bagging?

a. Decision Tree

b. Regression

c. Classification

d. Random Forest

10. To find the minimum or the maximum of a function, we set the gradient to zero because:

a. The value of the gradient at extrema of a function is always zero

b. Depends on the type of problem

c. Both A and B

d. None of the above

11. The most widely used metrics and tools to assess a classification model are:

A. Confusion matrix

  
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- B. Cost-sensitive accuracy
- C. Area under the ROC curve
- D. All of the above

12. Which of the following is a good test dataset characteristic?

- a. Large enough to yield meaningful results
- b. Is representative of the dataset as a whole
- c. Both A and B
- d. None of the above

13. Which of the following is a disadvantage of decision trees?

- a. Factor analysis
- b. Decision trees are robust to outliers
- c. Decision trees are prone to be overfit
- d. None of the above

14. How do you handle missing or corrupted data in a dataset?

- a. Drop missing rows or columns
- b. Replace missing values with mean/median/mode
- c. Assign a unique category to missing values
- d. All of the above

  
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15. Why is second order differencing in time series needed?

- a. To remove stationarity
- b. To find the maxima or minima at the local point
- c. Both A and B
- d. None of the above

  
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### Report

Name of the course: Introduction to Machine Learning with Matlab

Course Code: EC18191

Course Coordinator: Ms.P.Delphine Mary Ap/ECE & Mrs.N.Latha AP/ECE

Total Hours: 31

Academic Year: 2018-2019

I hereby affirm that the entire course contents listed in the course syllabus of the certificate program "Introduction to Machine Learning with Matlab" have educated to the students as the part of the prescribed co-curricular activities through Certificate Program.

To enable participants to have a good understanding of past data and select potential analytics and machine learning techniques to have a superior understanding of the past and more accurately predict the future.

I confirmed that the certificate program titled as "Introduction to Machine Learning with Matlab" has been conducted in the beginning of the semester and course delivery along with attendance of the students was recorded. I confirmed that all the students were actively attended this certificate Program and performed well throughout the program and eligible students received the certificate.

  
Course Coordinator

  
HoD/ECE

  
Principal

  
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## Course Completion Certificate

This is to Certify that Mr/Ms. A. Arana

of III - ECE has Completed the Course on

Introduction to Marking Learning from 18-6-2018 to 23-6-2018  
USING MATLAB

  
Course Coordinator

  
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## Course Completion Certificate

This is to Certify that Mr/Ms. A. S. Mohamed Rayan

of III - ECE has Completed the Course on

Introduction to Machine Learning Using from 18.6.2018 to 22.6.2018  
MATLAB

  
Course Coordinator

  
Hod

  
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Website: - www.miet.edu

Ph: 0431 - 2660 303

Date: 03.12.2018

To

The Principal  
M.I.E.T Engineering College,  
Trichy - 620007

Respected Madam,

Sub: Permission to conduct the certificate program - Reg...

We have planned to conduct the certificate program for our Third and Final year students from 10.12.2018 to 15.12.2018)

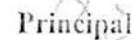
| Name of the Certificate Program                               | Course Coordinator                       |
|---------------------------------------------------------------|------------------------------------------|
| Basic of Software Defined Radio and its practical application | Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE |

So kindly give us permission to conduct the course and to utilize the class room.

Thanking you

  
Course Coordinator

  
HoD/ECE

  
Principal

  
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## M.I.E.T. ENGINEERING COLLEGE

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Email: principalengg@miet.edu, contact@miet.edu

Website: - www.miet.edu

Ph: 0431 - 2660 303

05.12.2018

### CIRCULAR

#### Sub: Certificate Program

It is planned to conduct the Certificate Program for the Third year and Final year Electronics and Communication Engineering students.

The Certificate Program is short term certificate courses which are designed and offered by our department for the benefit of our students.

Certificate Program will be conducted at free of cost and based on the performance of the participated students, the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

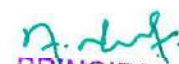
| Name of the Certificate Program                                                  | Course Coordinator                       |
|----------------------------------------------------------------------------------|------------------------------------------|
| Basic of Software Defined Radio and its practical application                    | Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE |
| Commencement of course from 10.12.2018 to 15.12.2018<br>Time: 09.30 AM - 5.00 PM |                                          |

  
Course Coordinator

  
IQAC Coordinator

  
HoD/ECE

  
Principal

  
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## Certificate Program ( III Year/VI Semester and IV Year/VIII Semester )

### Course Syllabus

Name of the course : Basic of Software Defined Radio and its practical application

Course Code: EC18192

Course Coordinator: Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE

Total hours:35

Academic Year:2018-2019

#### Objectives:

- This course aims in understanding an in-depth knowledge of wireless RF hardware design issues and to evaluate the performances by implementing a test bed using Software defined radio.

#### Unit-1 Introduction to SDR

7

The Need for Software Radios, What Is a Software Radio? Characteristics and Benefits of a software radio, Design principles of software radio

#### Unit-2 Concepts of Software Defined Radio

7

Definition and need of software defined radio [SDR], benefits, Basic components and architecture of SDR, design issues of RF implementation of wireless system, re-configurability of RF hardware design using SDR.

#### Unit-3 Radio Frequency Design Issues

7

Basic issues in RF designing and Baseband processing of radio frequency design, flexibility of RF chain design using SDR, Transmitter and receiver design of RF wireless system, noise and distortion in RF chain, ADC/DAC in RF chain, overall performance of RF design, characteristics of SDR in terms of RF filter and baseband processing.

#### Unit-4 Waveform Generation Using SDR

7

Introduction to wireless communication system parameters – BER, SNR, Transmission power and Noise, spectrum efficiency, SDR design to implement transmitter design using modulation schemes in analog and digital domain, Receiver design including filtering, and demodulation, estimation of Bit error rate for simple structure of BPSK and QPSK.

#### Unit-5 Radio frequency implementation Issues:

7

The purpose of the RF Front-End, Dynamic Range, The principal challenges of receiver design, RF receiver, Front-End Topologies, Enhanced flexibility of the RF chain with software radios, Importance of the components to overall performance, Transmitter architectures and their issues, Noise and Distortion in the RF chain.

Total Hours:35

  
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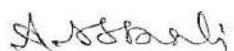
**Outcome:**

- To understand basic design issues of physical RF hardware blocks
- To apply the knowledge of wireless communication systems and signal processing filters, designs using Software defined radio

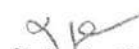
**Reference Book:**

- Tony J Roupheal, "RF and DSP for SDR," Elsevier Newnes Press, 2008. 2. P. Kenington, "RF and Baseband Techniques for Software Defined Radio," Artech House, 2005.

  
Course Coordinator

  
IQAC Coordinator

  
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Website: - www.miet.edu

Ph: 0431 - 2660 303

### Willing Student list

CP1 Coordinator: Ms.P.Delphine Mary Ap/ECE and A. Antony Joseph Arputha Raj AP/ECE

CP2 Coordinator: Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE

Academic Year: 2018-2019

| SL. NO | STUDENT NAME        | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|---------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1.     | Aabitha Begam. S    | ✓                                                                |                                                                                   |
| 2.     | Abdul Ajeez. A      | ✓                                                                |                                                                                   |
| 3.     | Abdul Rahman. M     | ✓                                                                |                                                                                   |
| 4.     | Afsana. A           | ✓                                                                |                                                                                   |
| 5.     | Ahamed Aakif. Z     | ✓                                                                |                                                                                   |
| 6.     | Akash. S            | ✓                                                                |                                                                                   |
| 7.     | Akshaya. M          | ✓                                                                |                                                                                   |
| 8.     | Ammu. P             | ✓                                                                |                                                                                   |
| 9.     | Ammu. S             | ✓                                                                |                                                                                   |
| 10.    | Annal Jebaseeli-. D | ✓                                                                |                                                                                   |
| 11.    | Antony Jero. J      | ✓                                                                |                                                                                   |
| 12.    | Arthi. J            | ✓                                                                |                                                                                   |
| 13.    | Asrath Nisha. S     | ✓                                                                |                                                                                   |
| 14.    | Boomika. P          | ✓                                                                |                                                                                   |
| 15.    | Chaandhini. C       | ✓                                                                |                                                                                   |
| 16.    | Daniel Vinith. G    | ✓                                                                |                                                                                   |
| 17.    | Defi Christina. C   | ✓                                                                |                                                                                   |

  
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| SL. NO | STUDENT NAME           | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 18.    | Deiva Rani. M          | ✓                                                                |                                                                                   |
| 19.    | Fazil Mohammed. B      | ✓                                                                |                                                                                   |
| 20.    | Gayathri. K            |                                                                  |                                                                                   |
| 21.    | Harini. P              | ✓                                                                |                                                                                   |
| 22.    | Hasiba Banu. H         | ✓                                                                |                                                                                   |
| 23.    | Hina. M                | ✓                                                                |                                                                                   |
| 24.    | Janani. M              | ✓                                                                |                                                                                   |
| 25.    | Jansirani. K           | ✓                                                                |                                                                                   |
| 26.    | Jasmine. E             |                                                                  |                                                                                   |
| 27.    | Karan. M               |                                                                  |                                                                                   |
| 28.    | Kavitha. M             |                                                                  |                                                                                   |
| 29.    | Kowsalya. K            |                                                                  |                                                                                   |
| 30.    | Krishnapriya. K        |                                                                  |                                                                                   |
| 31.    | Manikandan. T          |                                                                  |                                                                                   |
| 32.    | Mathina Beevi. S       |                                                                  |                                                                                   |
| 33.    | Mohamed Rizvanudeen. M | ✓                                                                |                                                                                   |
| 34.    | Mohamed Suwaidee. M    | ✓                                                                |                                                                                   |
| 35.    | Mohamed Ibrahim. M     | ✓                                                                |                                                                                   |
| 36.    | Niranjani. B           |                                                                  |                                                                                   |
| 37.    | Nithiksha. N           |                                                                  |                                                                                   |
| 38.    | Nithish Kumar. S       | ✓                                                                |                                                                                   |
| 39.    | Pavithra. C            | ✓                                                                |                                                                                   |
| 40.    | Puvanithy. M           | ✓                                                                |                                                                                   |

  
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| SL. NO | STUDENT NAME       | <u>CPI</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|--------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 41.    | Rizvana Begam. T   | ✓                                                                |                                                                                   |
| 42.    | Sabarinath. C      | ✓                                                                |                                                                                   |
| 43.    | Sabitha. S         | ✓                                                                |                                                                                   |
| 44.    | Safa Almaz. MS     | ✓                                                                |                                                                                   |
| 45.    | Sathiya Sheela. S  | ✓                                                                |                                                                                   |
| 46.    | Selciya. M         |                                                                  |                                                                                   |
| 47.    | Shakthivel. A      |                                                                  |                                                                                   |
| 48.    | Shalini. B         |                                                                  |                                                                                   |
| 49.    | Suruthi. M         |                                                                  |                                                                                   |
| 50.    | Tamil Mani. B      |                                                                  |                                                                                   |
| 51.    | Thajudeen. T       |                                                                  |                                                                                   |
| 52.    | Thilsara. S        |                                                                  |                                                                                   |
| 53.    | Vengatesh Kumar. M |                                                                  |                                                                                   |
| 54.    | Vigneshwaran. M    | ✓                                                                |                                                                                   |
| 55.    | Vimal Athithan. M  | ✓                                                                |                                                                                   |
| 56.    | Yogapriya. S       | ✓                                                                |                                                                                   |
| 57.    | Zam Zam Haliya. A  | ✓                                                                |                                                                                   |
| 58.    | Nisha Shalini. K   | ✓                                                                |                                                                                   |
| 59.    | Deepa. A           | ✓                                                                |                                                                                   |
| 60.    | Hari Vijay. R      | ✓                                                                |                                                                                   |
| 61.    | Kiruthigha. K      |                                                                  |                                                                                   |
| 62.    | Monica. J          | ✓                                                                |                                                                                   |
| 63.    | Vetriselvi. A      |                                                                  |                                                                                   |

  
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| SL. NO | STUDENT NAME          | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|-----------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 64.    | Aarthi. N             | ✓                                                                |                                                                                   |
| 65.    | Abarna. N             | ✓                                                                |                                                                                   |
| 66.    | Abdul Malik. T        | ✓                                                                |                                                                                   |
| 67.    | Ameer Sultan. J       | ✓                                                                |                                                                                   |
| 68.    | Ashik Mohamed. A      | ✓                                                                |                                                                                   |
| 69.    | Asrin Jaswani. S      | ✓                                                                |                                                                                   |
| 70.    | Bhuvaneswari. S       | ✓                                                                |                                                                                   |
| 71.    | Gayathri Vani. A      |                                                                  | ✓                                                                                 |
| 72.    | Guna Sunthari. B      |                                                                  | ✓                                                                                 |
| 73.    | Hari Haran. R         |                                                                  | ✓                                                                                 |
| 74.    | Lavanya. P            | ✓                                                                |                                                                                   |
| 75.    | Madhumitha. C         | ✓                                                                |                                                                                   |
| 76.    | Mohamed Faisal. S     | ✓                                                                |                                                                                   |
| 77.    | Mohamed Imran. M      | ✓                                                                |                                                                                   |
| 78.    | Mohamed Rafik. M      | ✓                                                                |                                                                                   |
| 79.    | Mohamed Riaz. A       | ✓                                                                |                                                                                   |
| 80.    | Mohamed Rizwan. B     | ✓                                                                |                                                                                   |
| 81.    | Mohamed Sirajudeen. S | ✓                                                                |                                                                                   |
| 82.    | Muhammed Azarudeen. J | ✓                                                                |                                                                                   |
| 83.    | Muthulakshmi. M       | ✓                                                                |                                                                                   |
| 84.    | Muthulakshmi. S       | ✓                                                                |                                                                                   |
| 85.    | Pavithra Devi. P      | ✓                                                                |                                                                                   |
| 86.    | Pearly. J             | ✓                                                                |                                                                                   |

  
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| SL. NO | STUDENT NAME       | <u>CP1</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|--------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 87.    | Raeisa. A          | ✓                                                                |                                                                                   |
| 88.    | Rifansiya. S       | ✓                                                                |                                                                                   |
| 89.    | Shabhan. R         |                                                                  | ✓                                                                                 |
| 90.    | Souban Mohamed. S  |                                                                  | ✓                                                                                 |
| 91.    | Suguna. S          | ✓                                                                |                                                                                   |
| 92.    | Surendhar. B       | ✓                                                                |                                                                                   |
| 93.    | Syed Sadham. N     | ✓                                                                |                                                                                   |
| 94.    | Thaslima Afrin. S  |                                                                  | ✓                                                                                 |
| 95.    | Vishnu Priya. N.J  |                                                                  | ✓                                                                                 |
| 96.    | Viveka. K          |                                                                  | ✓                                                                                 |
| 97.    | Fayaz Ahamed. A    |                                                                  | ✓                                                                                 |
| 98.    | Haribaskar. S      |                                                                  | ✓                                                                                 |
| 99.    | Janani. R          |                                                                  | ✓                                                                                 |
| 100.   | Mohamed Ishan. M   | ✓                                                                |                                                                                   |
| 101.   | Mohamed Rayan. A.S | ✓                                                                |                                                                                   |
| 102.   | Mohana Sundari. P  | ✓                                                                |                                                                                   |
| 103.   | Vishnuvarthan. N   |                                                                  |                                                                                   |
| 104.   | Asha Victoria. A   |                                                                  | ✓                                                                                 |
| 105.   | Bakkia Priya. M    |                                                                  | ✓                                                                                 |
| 106.   | Baranidharan. S    |                                                                  | ✓                                                                                 |
| 107.   | Catherine. V       |                                                                  | ✓                                                                                 |
| 108.   | Dayana. T          |                                                                  | ✓                                                                                 |
| 109.   | Deepika. S         |                                                                  | ✓                                                                                 |

  
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| SL. NO | STUDENT NAME                | <u>CPI</u><br>Introduction to<br>Machine Learning<br>with Matlab | <u>CP2</u><br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|-----------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 110.   | Denil Desosa. J             |                                                                  | ✓                                                                                 |
| 111.   | Fathima. L                  |                                                                  | ✓                                                                                 |
| 112.   | Ghousia Shimacenn. A        |                                                                  | ✓                                                                                 |
| 113.   | Hema. R                     |                                                                  |                                                                                   |
| 114.   | Hisham. S                   |                                                                  |                                                                                   |
| 115.   | Iyyappan. S                 |                                                                  |                                                                                   |
| 116.   | Janapriya. S                |                                                                  | ✓                                                                                 |
| 117.   | Joshua Francis. B           |                                                                  | ✓                                                                                 |
| 118.   | Keerthana. A                |                                                                  | ✓                                                                                 |
| 119.   | Kousalya. M                 |                                                                  |                                                                                   |
| 120.   | Madhumathi. R               |                                                                  | ✓                                                                                 |
| 121.   | Mahariba. M                 |                                                                  | ✓                                                                                 |
| 122.   | Malathy. R                  |                                                                  | ✓                                                                                 |
| 123.   | Manimegalai. M              |                                                                  | ✓                                                                                 |
| 124.   | Manisha. R                  |                                                                  | ✓                                                                                 |
| 125.   | Mathavi. K                  |                                                                  |                                                                                   |
| 126.   | Merlin Sybila. S            |                                                                  |                                                                                   |
| 127.   | Mohamed Matharsha. S        |                                                                  | ✓                                                                                 |
| 128.   | Mohamed Thowfeek Faruk. T.Z |                                                                  |                                                                                   |
| 129.   | Nabeez Ahamed. J            |                                                                  |                                                                                   |
| 130.   | Nagarjun. D                 |                                                                  | ✓                                                                                 |
| 131.   | Nasreen Banu. N             |                                                                  | ✓                                                                                 |
| 132.   | Nithiyanantham. G           |                                                                  |                                                                                   |

  
**PRINCIPAL**  
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| SL. NO | STUDENT NAME              | CP1<br>Introduction to<br>Machine Learning<br>with Matlab | CP2<br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|---------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 133.   | Preethi. S                |                                                           |                                                                            |
| 134.   | Prithivi. V               |                                                           | ✓                                                                          |
| 135.   | Priyadharshini. A         |                                                           | ✓                                                                          |
| 136.   | Pruthika. S               |                                                           | ✓                                                                          |
| 137.   | Ramya. B                  |                                                           | ✓                                                                          |
| 138.   | Rasika. A                 |                                                           | ✓                                                                          |
| 139.   | Roslin Shalini. J         |                                                           | ✓                                                                          |
| 140.   | Saranya. S                |                                                           | ✓                                                                          |
| 141.   | Sheik Abdul Kathar. I     |                                                           | ✓                                                                          |
| 142.   | Shirazunnisha. S.S        |                                                           | ✓                                                                          |
| 143.   | Siva. P                   |                                                           | ✓                                                                          |
| 144.   | Sornaprabhu. B            |                                                           | ✓                                                                          |
| 145.   | Swathika. A               |                                                           | ✓                                                                          |
| 146.   | Swathika. V               |                                                           | ✓                                                                          |
| 147.   | Tabassum Siddiqua. T      |                                                           | ✓                                                                          |
| 148.   | Thakira. J                |                                                           | ✓                                                                          |
| 149.   | Tharanya. V               |                                                           | ✓                                                                          |
| 150.   | Thasneem Banu. M          |                                                           | ✓                                                                          |
| 151.   | Vennila. B                |                                                           | ✓                                                                          |
| 152.   | Yoga. P                   |                                                           | ✓                                                                          |
| 153.   | Yogalakshmi. P            |                                                           | ✓                                                                          |
| 154.   | Antony Santhosh Raj. Y. Y |                                                           | ✓                                                                          |
| 155.   | Beaulah Kirubavathy. B    |                                                           | ✓                                                                          |

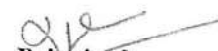
  
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42

| SL. NO | STUDENT NAME               | CP1<br>Introduction to<br>Machine Learning<br>with Matlab | CP2<br>Basic of Software<br>Defined Radio and its<br>practical application |
|--------|----------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 156.   | Karthika. M                |                                                           | ✓                                                                          |
| 157.   | Mahadir Mohamed. M         |                                                           | ✓                                                                          |
| 158.   | Mary Ezhil Arasi. R        |                                                           | ✓                                                                          |
| 159.   | Mohamed Nasurudeen. K      |                                                           | ✓                                                                          |
| 160.   | Praveen Kumar. B           |                                                           | ✓                                                                          |
| 161.   | Revathibalasathiyavathi. B |                                                           | ✓                                                                          |
| 162.   | Subashini. V               |                                                           |                                                                            |
| 163.   | Yogeshwaran.M. M           |                                                           |                                                                            |

  
Course Coordinator

  
HoD/ECE

  
Principal

  
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Ph: 0431 - 2660 303

## Certificate Program ( III Year/VI Semester and IV Year/VIII Semester )

### Program Schedule

Name of the Course: Basic of Software Defined Radio and its practical application

Course Code: EC18192

Course Coordinator: Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE

Total Hours: 35

Academic Year: 2018-2019

| Sl.No | Topics to be Covered                                                  | Hours | Date of Delivery |
|-------|-----------------------------------------------------------------------|-------|------------------|
| 1.    | Introduction to SDR                                                   | 7     | 10.12.2018       |
| 2.    | The Need for Software Radios                                          |       |                  |
| 3.    | What Is a Software Radio                                              |       |                  |
| 4.    | Characteristics of a software radio                                   |       |                  |
| 5.    | Benefits of a software radio                                          |       |                  |
| 6.    | Design of software radio                                              |       |                  |
| 7.    | principles of software radio                                          |       |                  |
| 8.    | Basic components of SDR, advantages of SDR                            | 7     | 11.12.2018       |
| 9.    | Architecture of SDR,                                                  |       |                  |
| 10.   | Receiver Architecture                                                 |       |                  |
| 11.   | Transmitter Architecture                                              |       |                  |
| 12.   | Design issues of RF implementation of wireless system                 |       |                  |
| 13.   | Low IF receiver, Effect of Nonlinearity                               |       |                  |
| 14.   | Re-configurability of RF hardware design using SDR.                   |       |                  |
| 15.   | Basic issues in RF designing                                          | 7     | 12.12.2018       |
| 16.   | Baseband processing of radio frequency design                         |       |                  |
| 17.   | Flexibility of RF chain design using SDR                              |       |                  |
| 18.   | Transmitter and receiver design of RF wireless system                 |       |                  |
| 19.   | noise and distortion in RF chain                                      |       |                  |
| 20.   | ADC/DAC in RF chain, overall performance of R design                  |       |                  |
| 21.   | Characteristics of SDR in terms of RF filter and baseband processing. |       |                  |

  
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| Sl.No | Topics to be Covered                                                | Hours | Date of Delivery |
|-------|---------------------------------------------------------------------|-------|------------------|
| 22.   | wireless communication system parameters-Introduction               | 7     | 13.12.2018       |
| 23.   | BER, SNR, Transmission power and Noise,                             |       |                  |
| 24.   | spectrum efficiency,                                                |       |                  |
| 25.   | SDR design to implement transmitter design Using Modulation Schemes |       |                  |
| 26.   | Receiver design including filtering, and demodulation               |       |                  |
| 27.   | Estimation of Bit error rate for simple structure of BPSK           |       |                  |
| 28.   | Estimation of Bit error rate for simple structure of QPSK.          |       |                  |
| 29.   | The purpose of the RF Front-End, Dynamic Range                      | 7     | 14.12.2018       |
| 30.   | The principal challenges of receiver design                         |       |                  |
| 31.   | Front-End Topologies                                                |       |                  |
| 32.   | Enhanced flexibility of the RF chain with SDR                       |       |                  |
| 33.   | Importance of the components to overall performance                 |       |                  |
| 34.   | Transmitter architectures and their issues                          |       |                  |
| 35.   | Noise and Distortion in the RF chain.                               |       |                  |

*Clad*  
*Ba*

Course Coordinator

*H*

HoD/ECE

*Principal*

Principal

*A. L. S.*  
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GUNDUR, TIRUCHIRAPPALLI-620 007.



# M.I.E.T. ENGINEERING COLLEGE

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)

TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.

Email: principalengg@miet.edu, contact@miet.edu

Website: - www.miet.edu

Ph: 0431 - 2660 303

## Resource Person Details

|                                    |                                                                                                                                                                                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title of the program               | Basic of Software Defined Radio and its practical application                                                                                                                                                                                          |
| Course Code                        | EC18192                                                                                                                                                                                                                                                |
| Duration and timing of the program | 35 Hrs, 09.30AM - 05.00 PM                                                                                                                                                                                                                             |
| Name of the resource person        | Ms.Chandni AP/ECE                                                                                                                                                                                                                                      |
| Photo of the resource person       |                                                                                                                                                                      |
| Email address                      | chandni@miet.edu                                                                                                                                                                                                                                       |
| Contact number                     | 9629647627                                                                                                                                                                                                                                             |
| Designation                        | Assistant Professor                                                                                                                                                                                                                                    |
| Educational qualification          | <ul style="list-style-type: none"> <li>➤ B.E -Electronics and Communication Engineering 2010 in nandha Engineering College with 7.76%.</li> <li>➤ M.E - Computer and Communication Engineering 2012 in Kongu Engineering College with 7.76%</li> </ul> |
| Experience                         | <ul style="list-style-type: none"> <li>➤ Teaching Experience - 8 Years.</li> </ul>                                                                                                                                                                     |

  
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|                                    |                                                                                                                                                                                                                                                       |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title of the program               | Basic of Software Defined Radio and its practical application                                                                                                                                                                                         |
| Course Code                        | EC18192                                                                                                                                                                                                                                               |
| Duration and timing of the program | 35 Hrs, 09.30AM – 05.00 PM                                                                                                                                                                                                                            |
| Name of the resource person        | Ms.M.Pushpa AP/ECE                                                                                                                                                                                                                                    |
| Photo of the resource person       |                                                                                                                                                                     |
| Email address                      | Pushpa.m@miet.edu                                                                                                                                                                                                                                     |
| Contact number                     | 7904546960                                                                                                                                                                                                                                            |
| Designation                        | Assistant Professor                                                                                                                                                                                                                                   |
| Educational qualification          | <ul style="list-style-type: none"> <li>➤ B.E -Electronics and Communication Engineering 2013 in Sri Vidya College of Engineering and Technology with 7.76%</li> <li>➤ M.E – VLSI Design 2015 in M.I.E.T Engineering College with 8.10 CGPA</li> </ul> |
| Experience                         | ➤ Teaching Experience 1 Years                                                                                                                                                                                                                         |

  
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Ph: 0434 - 2660 303

## Certificate Program ( III Year/VI Semester and IV Year/VIII Semester )

### Attendance Sheet

Name of the course: Basic of Software Defined Radio and its practical application

Course code: EC18192

Course coordinator: Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE

Academic Year: 2018-19

| SL.NO | ROLL NO  | STUDENT NAME      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-------|----------|-------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1.    | E1164009 | Gayathri Vani. A  | a | / | / | / | / | a | a | / | a | /  | /  | /  | a  | /  | /  | /  | a  | /  | /  | /  |
| 2.    | E1164011 | Guna Sunthari. B  | / | / | a | / | a | / | / | a | / | /  | a  | /  | a  | /  | /  | a  | /  | /  | /  | a  |
| 3.    | E1164012 | Hari Haran. R     | / | / | / | / | / | / | a | / | / | /  | /  | /  | a  | /  | /  | a  | /  | /  | /  | a  |
| 4.    | E1164032 | Shabhan. R        | / | / | a | / | / | / | a | / | / | /  | /  | /  | /  | /  | a  | /  | /  | /  | /  | a  |
| 5.    | E1164033 | Souban Mohamed. S | a | / | / | / | / | / | / | a | / | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  |
| 6.    | E1164037 | Thaslima Afrin. S | / | / | / | / | / | / | a | / | / | /  | a  | /  | /  | /  | a  | /  | /  | /  | /  | /  |
| 7.    | E1164040 | Vishnu Priya. N.J | / | a | / | a | / | / | / | / | a | /  | /  | a  | /  | /  | /  | /  | /  | /  | /  | /  |
| 8.    | E1164041 | Viveka. K         | / | a | / | / | a | / | / | a | / | a  | /  | a  | /  | /  | /  | /  | /  | /  | /  | /  |
| 9.    | E2174043 | Fayaz Ahamed. A   | / | / | / | a | / | / | a | / | / | /  | a  | /  | /  | /  | /  | a  | /  | /  | /  | a  |
| 10.   | E2174044 | Haribaskar. S     | / | / | / | / | / | / | a | / | / | /  | /  | a  | /  | /  | a  | /  | /  | /  | /  | /  |
| 11.   | E2174045 | Janani. R         | a | / | a | / | / | a | / | a | / | /  | a  | /  | /  | /  | a  | /  | /  | /  | /  | /  |
| 12.   | E1154001 | Asha Victoria. A  | / | / | / | / | / | / | a | / | / | /  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

  
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| SL.NO | ROLL NO  | STUDENT NAME         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|-------|----------|----------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 13.   | E1154002 | Bakkia Priya. M      | 1 | a | 1 | 1 | 1 | a | 1 | a | a | 1  | 1  | 1  | 1  | a  | 1  | 1  | a  | 1  | 1  | 1  |
| 14.   | E1154003 | Baranidharan. S      | 1 | 1 | 1 | a | a | 1 | 1 | 1 | 1 | a  | a  | 1  | 1  | a  | 1  | a  | 1  | a  | 1  | 1  |
| 15.   | E1154004 | Catherine. V         | 1 | 1 | a | 1 | 1 | a | 1 | 1 | 1 | 1  | 1  | 1  | a  | 1  | 1  | 1  | a  | 1  | 1  | 1  |
| 16.   | E1154006 | Dayana. T            | 1 | 1 | 1 | a | 1 | 1 | 1 | 1 | 1 | 1  | 1  | a  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| 17.   | E1154007 | Deepika. S           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | a | 1  | 1  | 1  | 1  | 1  | 1  | 1  | a  | 1  | a  | 1  |
| 18.   | E1154008 | Denil Desosa. J      | 1 | 1 | a | 1 | a | 1 | 1 | 1 | 1 | 1  | 1  | a  | 1  | 1  | 1  | 1  | 1  | a  | 1  | 1  |
| 19.   | E1154009 | Fathima. L           | a | a | 1 | a | a | 1 | 1 | 1 | 1 | 1  | a  | 1  | a  | 1  | 1  | 1  | a  | 1  | 1  | 1  |
| 20.   | E1154010 | Ghousia Shimaen. A   | 1 | 1 | a | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | a  | 1  | a  | a  | 1  | 1  | 1  | 1  |
| 21.   | E1154014 | Janapriya. S         | a | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | 1  | a  | a  | 1  | a  | 1  | 1  | 1  | 1  | 1  | 1  |
| 22.   | E1154015 | Joshua Francis. B    | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | a  |
| 23.   | E1154017 | Keerthana. A         | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | a | a  | 1  | 1  | 1  | 1  | a  | 1  | 1  | 1  | 1  | 1  |
| 24.   | E1154019 | Madhumathi. R        | a | a | 1 | 1 | 1 | 1 | 1 | 1 | a | 1  | a  | a  | 1  | 1  | 1  | a  | 1  | a  | 1  | 1  |
| 25.   | E1154020 | Mahariba. M          | 1 | 1 | a | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | a  | a  | a  | 1  | 1  | a  | 1  | a  | 1  |
| 26.   | E1154021 | Malathy. R           | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | 1 | 1  | a  | 1  | a  | 1  | a  | a  | 1  | 1  | a  | 1  |
| 27.   | E1154022 | Manimegalai. M       | a | 1 | a | 1 | 1 | 1 | 1 | 1 | a | 1  | a  | 1  | 1  | 1  | 1  | 1  | a  | 1  | a  | 1  |
| 28.   | E1154023 | Manisha. R           | 1 | 1 | a | 1 | 1 | 1 | 1 | 1 | a | 1  | 1  | 1  | a  | 1  | a  | 1  | a  | 1  | 1  | 1  |
| 29.   | E1154026 | Mohamed Matharsha. S | 1 | 1 | 1 | a | a | a | a | 1 | 1 | 1  | a  | a  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| 30.   | E1154030 | Nagarjun. D          | a | a | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | a  | 1  | 1  | 1  | a  | 1  | a  | 1  |

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| SL.NO | ROLL NO  | STUDENT NAME          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|-------|----------|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 31.   | E1154031 | Nasreen Banu. N       | 1 | a | 1 | 1 | 1 | 1 | a | 1 | a | a  | a  | 1  | a  | 1  | 1  | a  | a  | 1  | a  | 1  |
| 32.   | E1154034 | Prithivi. V           | 1 | a | a | a | a | 1 | 1 | 1 | 1 | 1  | a  | 1  | 1  | 1  | 1  | a  | 1  | 1  | 1  | 1  |
| 33.   | E1154035 | Priyadharshini. A     | 1 | 1 | 1 | 1 | 1 | 1 | 1 | a | a | 1  | 1  | 1  | 1  | 1  | a  | 1  | 1  | a  | 1  | 1  |
| 34.   | E1154036 | Pruthika. S           | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | a  | 1  |
| 35.   | E1154039 | Ramya. B              | 1 | 1 | a | a | a | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | a  | 1  | 1  | 1  | 1  |
| 36.   | E1154040 | Rasika. A             | a | 1 | 1 | 1 | 1 | a | 1 | 1 | a | a  | 1  | 1  | 1  | 1  | a  | 1  | 1  | 1  | 1  | 1  |
| 37.   | E1154041 | Roslin Shalini. J     | 1 | a | a | a | a | 1 | 1 | 1 | 1 | 1  | 1  | 1  | a  | 1  | 1  | 1  | 1  | a  | 1  | 1  |
| 38.   | E1154043 | Saranya. S            | a | 1 | 1 | 1 | 1 | a | 1 | 1 | a | a  | 1  | a  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| 39.   | E1154044 | Sheik Abdul Kathar. I | 1 | 1 | 1 | 1 | 1 | 1 | a | 1 | 1 | a  | 1  | 1  | 1  | 1  | a  | a  | 1  | 1  | 1  | 1  |
| 40.   | E1154046 | Shirazunnisha. S.S    | 1 | 1 | 1 | 1 | 1 | 1 | a | 1 | 1 | 1  | a  | 1  | 1  | 1  | 1  | 1  | a  | a  | 1  | 1  |
| 41.   | E1154047 | Siva. P               | 1 | 1 | a | a | a | 1 | a | a | a | a  | a  | 1  | a  | 1  | 1  | 1  | 1  | 1  | a  | 1  |
| 42.   | E1154048 | Sornaprabhu. B        | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | a  | 1  | 1  | a  | 1  | 1  | 1  | 1  | 1  | 1  |
| 43.   | E1154049 | Swathika. A           | 1 | 1 | a | a | a | 1 | 1 | a | a | a  | a  | 1  | 1  | 1  | 1  | 1  | 1  | a  | a  | 1  |
| 44.   | E1154050 | Swathika. V           | 1 | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | 1  | a  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |
| 45.   | E1154051 | Tabassum Siddiqua. T  | a | 1 | 1 | 1 | a | 1 | 1 | 1 | 1 | 1  | 1  | a  | 1  | 1  | a  | 1  | 1  | 1  | a  | 1  |
| 46.   | E1154052 | Thakira. J            | 1 | 1 | a | a | 1 | a | 1 | 1 | a | a  | a  | 1  | 1  | a  | 1  | 1  | 1  | 1  | 1  | 1  |
| 47.   | E1154053 | Tharanya. V           | 1 | 1 | a | a | a | 1 | 1 | 1 | 1 | 1  | a  | 1  | a  | 1  | a  | a  | 1  | 1  | 1  | 1  |
| 48.   | E1154054 | Thasneem Banu. M      | a | 1 | 1 | 1 | 1 | a | 1 | 1 | 1 | 1  | a  | 1  | a  | 1  | a  | 1  | 1  | 1  | a  | 1  |

  
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| SL.NO                        | ROLL NO  | STUDENT NAME               | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 18 | 20 |
|------------------------------|----------|----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 49.                          | E1154055 | Vennila. B                 | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  |
| 50.                          | E1154056 | Yoga. P                    | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 51.                          | E1154057 | Yogalakshmi. P             | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 52.                          | E2164059 | Antony Santhosh Raj.Y. Y   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 53.                          | E2164061 | Beulah Kirubavathy. B      | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  |
| 54.                          | E2164062 | Karthika. M                | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 55.                          | E2164063 | Mahadir Mohamed. M         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 56.                          | E2164064 | Mary Ezhil Arasi. R        | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 57.                          | E2164065 | Mohamed Nasurudeen. K      | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 58.                          | E2164066 | Praveen Kumar. B           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 59.                          | E2164067 | Revathibalasathiyavathi. B | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| Total No Students Presents   |          |                            | 45 | 52 | 42 | 44 | 42 | 51 | 39 | 49 | 42 | 39 | 38 | 51 | 44 | 42 | 45 | 42 | 52 | 42 | 48 | 50 |
| Total No Students Absent     |          |                            | 14 | 07 | 12 | 15 | 17 | 08 | 20 | 10 | 17 | 20 | 20 | 08 | 15 | 12 | 14 | 12 | 07 | 17 | 11 | 09 |
| Signature Course Coordinator |          |                            | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl |

  
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| SL.NO | ROLL NO  | STUDENT NAME      | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
|-------|----------|-------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1.    | E1164009 | Gayathri Vani. A  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 2.    | E1164011 | Guna Sunthari. B  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 3.    | E1164012 | Hari Haran. R     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 4.    | E1164032 | Shabhan. R        | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 5.    | E1164033 | Souban Mohamed. S | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 6.    | E1164037 | Thaslima Afrin. S | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  |
| 7.    | E1164040 | Vishnu Priya. N.J | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 8.    | E1164041 | Viveka. K         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 9.    | E2174043 | Fayaz Ahamed. A   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 10.   | E2174044 | Haribaskar. S     | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 11.   | E2174045 | Janani. R         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 12.   | E1154001 | Asha Victoria. A  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 13.   | E1154002 | Bakkia Priya. M   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 14.   | E1154003 | Baranidharan. S   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 15.   | E1154004 | Catherine. V      | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 16.   | E1154006 | Dayana. T         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 17.   | E1154007 | Deepika. S        | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

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| SL.NO | ROLL NO  | STUDENT NAME         | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
|-------|----------|----------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 18.   | E1154008 | Denil Desosa. J      | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 19.   | E1154009 | Fathima. L           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 20.   | E1154010 | Ghousia Shimaen. A   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 21.   | E1154014 | Janapriya. S         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 22.   | E1154015 | Joshua Francis. B    | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 23.   | E1154017 | Keerthana. A         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 24.   | E1154019 | Madhumathi. R        | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 25.   | E1154020 | Mahariba. M          | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 26.   | E1154021 | Malathy. R           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 27.   | E1154022 | Manimegalai. M       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 28.   | E1154023 | Manisha. R           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 29.   | E1154026 | Mohamed Matharsha. S | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 30.   | E1154030 | Nagarjun. D          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 31.   | E1154031 | Nasreen Banu. N      | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  |
| 32.   | E1154034 | Prithivi. V          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 33.   | E1154035 | Priyadarshini. A     | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  |
| 34.   | E1154036 | Pruthika. S          | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 35.   | E1154039 | Ramya. B             | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

  
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| SL.NO | ROLL NO  | STUDENT NAME                | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
|-------|----------|-----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 36.   | E1154040 | Rasika. A                   | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 37.   | E1154041 | Roslin Shalini. J           | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  |
| 38.   | E1154043 | Saranya. S                  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 39.   | E1154044 | Sheik Abdul Kathar. I       | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 40.   | E1154046 | Shirazunnisha. S.S          | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 41.   | E1154047 | Siva. P                     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  |
| 42.   | E1154048 | Sornaprabhu. B              | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  |
| 43.   | E1154049 | Swathika. A                 | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 44.   | E1154050 | Swathika. V                 | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 45.   | E1154051 | Tabassum Siddiqua. T        | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 46.   | E1154052 | Thakira. J                  | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  |
| 47.   | E1154053 | Tharanya. V                 | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 48.   | E1154054 | Thasneem Banu. M            | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 49.   | E1154055 | Vennila. B                  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 50.   | E1154056 | Yoga. P                     | a  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 51.   | E1154057 | Yogalakshmi. P              | /  | /  | /  | /  | /  | /  | /  | a  | a  | a  | a  | a  | a  | /  | /  | /  | /  |
| 52.   | E2164059 | Antony Santhosh Raj.Y.<br>Y | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |

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| SL.NO                        | ROLL NO  | STUDENT NAME               | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 |
|------------------------------|----------|----------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 53.                          | E2164061 | Beaulah Kirubavathy. B     | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 54.                          | E2164062 | Karthika. M                | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 55.                          | E2164063 | Mahadir Mohamed. M         | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 56.                          | E2164064 | Mary Ezhil Arasi. R        | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 57.                          | E2164065 | Mohamed Nasurudeen. K      | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 58.                          | E2164066 | Praveen Kumar. B           | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| 59.                          | E2164067 | Revathibalasathiyavathi .B | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  | /  |
| Total No Students Presents   |          |                            | 30 | 40 | 41 | 40 | 40 | 30 | 31 | 55 | 56 | 55 | 56 | 55 | 55 | 56 | 56 | 50 | 50 |
| Total No Students Absent     |          |                            | 29 | 19 | 19 | 19 | 19 | 29 | 28 | 4  | 3  | 4  | 3  | 4  | 4  | 3  | 3  | 09 | 09 |
| Signature Course Coordinator |          |                            | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl | cl |

*Clad Pava.*  
Course Coordinator

*HoD/ECE*  
HoD/ECE

*Principal*  
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# M.I.E.T. ENGINEERING COLLEGE

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## Certificate Program Assessment Test

Name of the course: Basic of Software Defined Radio and its practical application

Course Code: EC18192

Academic Year: 2018-2019

Date: 15.12.2018

Time: 01:30 hrs

1. Which of the following is not true regarding software-defined-radios?
  - a. Functions are digitally defined
  - b. Reconfigurable
  - c. No hardware is required at all
  - d. Algorithms should be updated according to the digital platform
2. Convert 41.76 dBm transmitted power to watt.
  - a. 1 W
  - b. 5 W
  - c. 10 W
  - d. 15 W
3. Frequency up conversion is required in a radio system to
  - a. Reduce the attenuation to the signal
  - b. Reduce the height of antenna
  - c. Be able to send more information
4. Which of the following components in a radio is required for directional communication?
  - a. Power Amplifier
  - b. Mixer
  - c. Circulator
  - d. Filter
5. Which of the following is not a part of traditional RF subsystems?
  - a) Filter
  - b) Low noise amplifier

  
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- c) Multiplexer  
d) Frequency translation

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6. Limited dynamic range in digital RF system can be improved by \_\_\_\_\_

- a) digital filter  
b) digital amplifier  
c) digital equalizer  
d) digital suppressor

7. \_\_\_\_\_ and \_\_\_\_\_ are the parameters that define software defined radio applications.

- a) Linearity, SNR  
b) Dynamic range, SNR  
c) Linearity, Dynamic range  
d) Bandwidth, SNR

8. Which of the following influences the spurious free dynamic range?

- a) Second-order intercept  
b) Second-order intermodulation product  
c) Third-order intercept  
d) Third-order intermodulation product

9. The point of intersection of the fundamental signal with the power of third-order intermodulation product is called as \_\_\_\_\_

- a) input-referenced third-order intercept point  
b) output-referenced third-order intercept point  
c) input-referenced third-order intermodulation point  
d) output-reference third-order intermodulation point

10. Signal to noise ratio is the preferred metric when \_\_\_\_\_

- a) desired signal bandwidth is less than Nyquist bandwidth  
b) desired signal bandwidth is approximately equal to Nyquist bandwidth

  
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- c) desired signal bandwidth is greater than Nyquist bandwidth  
d) bandpass sampling is used

11. Which of the following is the preferred metric when the desired signal bandwidth is less than Nyquist bandwidth?

- a) Noise Power Ratio  
b) Spurious Free Dynamic Range (SFDR)  
c) Full Power Analog Input Bandwidth  
d) Half Power Analog Input Bandwidth

12. The ratio of \_\_\_\_\_ the notch filter to the \_\_\_\_\_ the notch filter gives the Noise Power Ratio.

- a) maximum spectral density inside, spectral density outside  
b) spectral density inside, maximum spectral density outside  
c) spectral density outside, maximum spectral density inside  
d) maximum spectral density outside, spectral density inside

13. If  $W_a$  is the receiver bandwidth and NF is the noise figure, the noise power of a noise limited receiver is given by the expression \_\_\_\_\_

- a)  $P_m = -184\text{dBm} + 10\log(W_a) + \text{NF}$   
b)  $P_m = -174\text{dBm} + 10\log(W_a) + \text{NF}$   
c)  $P_m = -174\text{dBm} + 10\log(\text{NF}) + W_a$   
d)  $P_m = -184\text{dBm} + 10\log(\text{NF}) + W_a$

14. Which of the following applications takes only SFDR as its performance metric?

- a) Spread spectrum access  
b) Wideband digital receiver  
c) Cellular Phone  
d) Spectrum analysis

  
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15. Which of the following metrics is considered for spread spectrum method?

- a) SNR
- b) SNR, SFDR
- c) SNR, SFDR, NPR
- d) SNR, NPR



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### Report

Name of the course: Basic of Software Defined Radio and its practical application

Course Code: EC18192

Course Coordinator: Ms.Chandni AP/ECE and Ms.M.Pushpa AP/ECE

Total Hours: 35

Academic Year: 2018-2019

I hereby affirm that the entire course contents listed in the course syllabus of the certificate program "Basic of Software Defined Radio and its practical application" have educated to the students as the part of the prescribed co - curricular activities through Certificate Program.

The Students can able to make system-level decisions for software defined radio technology and Understanding of analog RF components as front end block in implementation of SDR and also again Knowledge in digital hardware architectures and understanding of developmental methods.

I confirmed that the certificate program titled as "Basic of Software Defined Radio and its practical application" has been conducted in the beginning of the semester and course delivery along with attendance of the students was recorded. I confirmed that all the students were actively attended this certificate Program and performed well throughout the program and eligible students received the certificate.

  
Course Coordinator

  
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Principal

  
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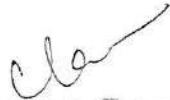
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## Course Completion Certificate

This is to Certify that Mr/Ms. J. peary  
of MIE has Completed the Course on

Basic of software defined radio and its practical application from 10.12.2018 to 15.12.2018

  
Course Coordinator

  
Head

  
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Principal



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## Course Completion Certificate

This is to Certify that Mr/Ms. A. Gayathri Vani

of IV ECE has Completed the Course on

Basic of Software defined Radio & its from 10.12-2018 to 15.12-2018  
practical applications

  
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