



# RAAK

## COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)

From

Mr. Joseph Selvaraj  
Assistant Professor/ECE  
RAAK College of Engineering and Technology  
Puducherry -110

01/08/2018

To

The Principal  
RAAK College of Engineering and Technology  
Puducherry -110

Respected Sir,

Sub: Requisition for Approval to Conduct Skill Development program/Value added Course on **"18ECE01 Communication switching systems"**-reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on **"18ECE01 Communication switching systems"** for all the Final Year Electronics and Communication Engineering students from 09-08-2018 to 14-08-20218.

The main focus of this program is to provide a better exposure to our students on the Communication switching systems

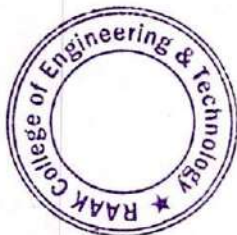
The syllabus and course plan structured are not listed in the Pondicherry University Curriculum and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully,

Mr. Joseph Selvaraj  
AP/ECE



Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
PRINCIPAL

RAAK College of Engineering & Technology  
No.1, Muthupillai Palayam Road,  
Sulthanpet Post,  
Puducherry - 605 110



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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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RAAKCET/PRINCIPAL/CIR/AUG2018

02/08/2018

### CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on "18ECE01-Communication switching systems" for all the Final Year ECE Department students from 09-08-2018 to 13-08-2018. Students are asked to utilize this opportunity and improve their skills.

PRINCIPAL

Circulation to:

1. All Students
2. All Faculty & Staff Members
3. All HoDs

Copy to:

1. All HoDs
2. Office



Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
PRINCIPAL  
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No.1, Muthupillai Palayam Road,  
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Puducherry - 605 110

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## COLLEGE OF ENGINEERING & TECHNOLOGY

( Approved by AICTE, New Delhi, Affiliated to Pondicherry University )

NO:1, MUTHUPILLAI PALAYAM ROAD, G.N. PALAYAM, VILLIYANUR, PUDUCHERRY - 605 110



### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING PRESENTS

### VALUE ADDED COURSE ON COMMUNICATION SWITCHING SYSTEMS

2018-2019

DATE: 09/08/2018 to 13/08/2018

VENUE: RAAKCET

TIME: 09 am to 04 pm

Resource Person:

Dr. P. Arunagiri  
Assistant Professor,  
Mailam Engineering college.

For Registration Contact:

Mr. Joseph selvaraj , AP/ ECE.,  
8966542218.

HOD

Mr. Ayyapasamy



PRINCIPAL

Dr. A. Sivakumar

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
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raakengg@mail.com



www.raakengg.com



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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

18ECE01-Communication switching systems

Syllabus

Duration: 30 hours

#### Course Objective:

- To understand the working principles of switching systems from manual and electromechanical systems to stored program control systems.

#### Course Outcome:

Upon successful completion of the course students able to

- Explain the working Principle of Switching Systems Involved in Telecommunication Switching
- Assess the need for Voice Digitization and T Carrier Systems
- Compare and Analyze Line Coding Techniques and Examine its Error Performance
- Design Multi Stage Switching Structures involving time and Space Switching Stages

**Module 1:** (9 Hours)

Basic elements of communication network. Switching systems. Signaling and signaling functions.

**Module 2:** (9 Hours)

Digital telephone network. TDM Principles. PCM primary multiplex group. Plesiochronous digital hierarchy. Synchronous digital hierarchy. Echo cancellers.

**Module 3:** (9 Hours)

Digital transmission and multiplexing. Synchronous versus Asynchronous transmission. Line coding. Error performance. TDM. Framing, TDM loops and rings.

**Module 4:** (9 Hours)

Space division switching. Multiple-stage switching. Design examples. Switching matrix control. Time division switching. Multiple-stage time and spaces witching.



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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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**Module 5:**

**(9 Hours)**

Timing recovery. Jitter. Network synchronization. Digital subscriber access-ISDN. ADSL. HFC. Traffic analysis.

Course Designed by

Approved by

Principal



Dr. S. SEENUVASAMURTHI, M.E., Ph.C.  
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Puducherry - 605 110



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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### CO - ATTAINMENT MAPPING

Sl. No	Register Number	Student Name	CO1	CO2	CO3	CO4
1	15TC2201	MOHAMED ISMAIL A	✓	✓	✓	✓
2	15TC2202	SHAKILA M	✓	✓	✓	✓
3	15TC2203	THIRUMANGAI T	✓	✓	✓	✓
4	15TC2204	YASEER ARAFATH M	✓	✓	✓	✓



  
Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering  
18ECE01 Communication switching systems

#### COURSE PLAN

S.no	Date	Hours	Time	Topic	Resource Person
DAY -1					
1	09.08.18	1,2	9 AM -11 AM	Basic elements of communication network.	Dr. P. Arunagiri & Dr.N.Saranya
2		3,4	11.15 AM – 1.15 PM	Switching systems.	Dr. P. Arunagiri
3		5,6	2 PM -4 PM	Signaling and signaling functions.	Dr.N.Saranya
DAY 2					
4	10.08.18	7,8	9 AM -11 AM	Digital telephone network. TDM Principles	Dr. P. Arunagiri
5		9,10,	11.15AM – 1.15 PM	PCM primary multiplex group. Plesiochronous digital hierarchy.	Dr.N.Saranya
6		11,12	2 PM -4 PM	Synchronous digital hierarchy. Echo cancellers	Dr. P. Arunagiri
DAY -3					
7	11.08.18	13,14	9 AM -11 AM	Digital transmission and multiplexing	Dr.N.Saranya
8		15,16	11.15AM – 1.15 PM	Synchronous versus Asynchronous transmission..	Dr.N.Saranya
9		17,18	2 PM -4 PM	Line coding, Error performance. TDM. Framing. TDM loops and rings	Dr. P. Arunagiri
DAY -4					
10	12.08.18	19,20	9 AM -11 AM	Space division switching. Multiple stage switching	Dr.N.Saranya
11		21,22	11.15AM – 1.15 PM	Design examples. Switching matrix control.	Dr. P. Arunagiri



*[Handwritten Signature]*  
DR. M. DEEPAVASANDESI, M.E., Ph.D.  
PRINCIPAL

RAAK College of Engineering & Technology  
No.1, Muthupillai Palayam Road,  
Sultanpet Post,  
Puducherry - 605 110



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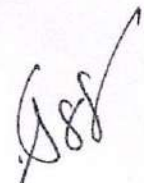
12		23,24	2 PM -4 PM	Time division switching. Multiple-stage time and spaces witching	Dr.N.Saranya
DAY-5					
13	13.08.18	25,26	9 AM -11 AM	Timing recovery. Jitter. Network	Dr. P. Arunagiri
14		27,28	11.15AM – 1.15 PM	Synchronization. Digital subscriber access	Dr.N.Saranya
15		29,30	2 PM -4 PM	ISDN. ADSL. HFC. Traffic analysis	Dr. P. Arunagiri
*** ASESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION ****					

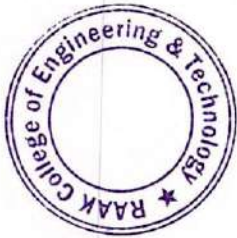
BREAK TIME: 11.00 TO 11.15 AM


LUNCH BREAK: 1.15 PM TO 2.00 PM

  
COURSE DESIGNED BY  
Mr. JOSEPH SELVARAJ

  
APPROVED BY  
SKILL DEVELOPMENT TEAM

  
PRINCIPAL



  
Dr. S. SEENUVASAMURTHI, M.E., Ph.C.  
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### VALUE ADDED COURSES

2018-2019

#### Department of Electronics and Communication Engineering

#### EVENT REPORT

Name of the Course 18ECE01- Communication switching systems

Name of the Instructors: Dr. P. Arunagiri & Dr.N.Saranya

Year/ Branch: IV/ECE

Duration of Course: 30 Hours (09-08-2018 to 13-08-2018)

Assessment Date: 20.08.2018

#### Post Event Summary:

The course was inaugurated on 09-08-2018 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2018 assessment was conducted and feedbacks were collected from all the participants.

#### CO - Attainment:

**CO1:** Explain The Working Principle Of Switching Systems Involved In Telecommunication Switching

**CO2:** Assess The Need For Voice Digitization And T Carrier Systems

**CO3:** Compare And Analyze Line Coding Techniques And Examine Its Error Performance

**CO4:** Design Multi Stage Switching Structures Involving Time And Space Switching Stages



Dr. S. SEENUVASAMURTHI, M.E., Ph.C.  
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Puducherry - 605 110

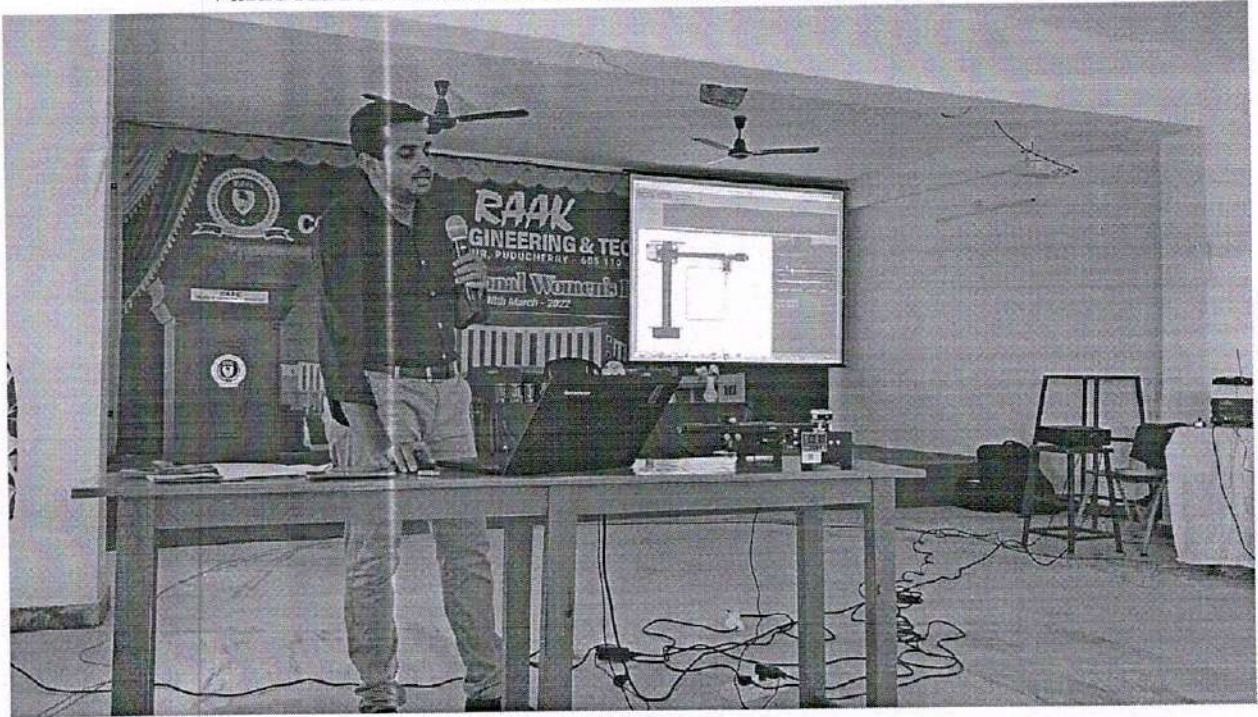


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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### Value Added Course on Communication Switching Systems 2018-19



Line coding, Error performance, TDM, Framing, TDM loops and rings on 11.08.18



  
DR. S. SRINIVASAN, M.E., Ph.D.  
PRINCIPAL  
RAAK College of Engineering & Technology  
No.1, Muthupillai Palayam Road,  
Sulthanpet Post,  
Puducherry - 605 110



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From

01/08/2018

Ms. P. Vishnupriya  
Assistant professor, ECE  
RAAK College of Engineering and Technology  
Puducherry -110

To

The Principal  
RAAK College of Engineering and Technology  
Puducherry -110

Respected sir,

Sub: Requisition for Approval to Conduct Skill Development program/Value added Course on **"18ECE02- Broadband access technologies"** - reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on **"18ECE02-Broadband access technologies"** for all the Third Year Electronics and Communication Engineering students from 09-08-2018 to 14-08-2018.

The main focus of this program is to provide a better exposure to our students on the Broadband access technologies

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.


Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully,

Ms. P. Vishnupriya  
AP/ECE



  
Dr. S. SEENUVASAMURTHI, M.E., Ph.C.  
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RAAKCET/PRINCIPAL/CIR/AUG2018

02/08/2018

### CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on “18ECE02-Broadband access technologies” for all the Third Year ECE Department students from 09-08-2018 to 13-08-2018. Students are asked to utilize this opportunity and improve their skills.

PRINCIPAL

Circulation to:

1. All Students
2. All Faculty & Staff Members
3. All HoDs

Copy to:

1. All HoDs
2. Office

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
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NO:1, MUTHUPILLAI PALAYAM ROAD, G.N. PALAYAM, VILLIYANUR, PUDUCHERRY - 605 110

### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING PRESENTS

### VALUE ADDED COURSE ON BROADBAND ACCESS TECHNOLOGIES

**2018-2019**

**DATE: 09/08/2018 to 13/08/2018**

**VENUE: RAAKCET**

**TIME: 09 am to 04 pm**

**Resource Person:**

**Dr. N. Saranya**  
Assistant Professor,  
Mailam Engineering college.

**For Registration Contact:**

**Mr. Krishnadass , AP/ ECE.,**  
**7854658918.**

**HOD**

**Mr. Ayyapasamy**



[raakengg@mail.com](mailto:raakengg@mail.com)

**PRINCIPAL**

**Dr. A. Sivakumar**

**Dr. S. SEENUVASAMURTHI, M.E., Ph.C.**  
PRINCIPAL

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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

18ECE02- Broadband access technologies

Syllabus

Duration: 30 hours

#### Course Objective:

- To impart fundamentals and latest technologies related to the design of broadband last mile-Access technologies for multimedia communication

#### Course Outcome:

Upon successful completion of the course students able to

- Recall and identify the basics of broadband technology systems and differentiate the differences between the various wired and wireless technology system.
- Illustrate the aspects of last mile data transport on copper wire networks and flavors ofdsl.
- Summarize the versions of cable network standard and mac protocols for hfc networks.
- Distinguish the cost effective broadband services for residential users and atm based and ethernet based passive optical networks.

#### Module 1:

(9 Hours)

Wired access technologies using Phone line modem, ISDN modem. Comparison-Cable, DSL, fiber and wireless access technologies.

#### Module 2:

(9 Hours)

Last mile copper access, Flavors of Digital subscriber lines, DSL deployment, Common local loop impairments, discrete multi-tone modulation, VDSL deployment and frequency plans. Standards for XDSL and comparison.

#### Module 3:


(9 Hours)

Last mile HFC access, Cable modems. Modulation schemes, DOCSIS. Standards- comparison, physical and MAC layer protocols for HFC networks, ATM and IP-centric modem. Switched digital video.

#### Module 4:

(9 Hours)

Fiber access technologies and architectures. ATM passive optical networks, upstream and downstream transport, Frame format, Ethernet passive optical network, Gigabit passive optical networks.

  
S. SRINIVASAN MURTHY, M.E., Ph.D.  
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**Module 5:**

**(9 Hours)**

Survey on emerging broadband wireless access technologies. LMDS, MMDS, WIMAX and WIFI, Satellite technologies serving as last mile solutions, Wireless LAN, Wireless personal area networking, 3G and 4G wireless systems.

**Course Designed by**

**Approved by**

**Principal**



**Dr. S. SEENUVASAMURTHI, M.E., Ph.D.**  
**PRINCIPAL**  
RAAK College of Engineering & Technology  
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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### CO - ATTAINMENT MAPPING

Sl. No	Register Number	Student Name	CO1	CO2	CO3	CO4
1	16TC2201	ARIPREETHA D	✓	✓	✓	✓
2	16TC2202	SIVAGAMI S	✓	✓	✓	✓
3	16TC2203	THULASI K	✓	✓	✓	✓



  
Dr. S. SEENUVASAMURTHI, M.E., Ph.D.,  
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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

18ECE02- Broadband access technologies

### COURSE PLAN

S.no	Date	Hours	Time	Topic	Resource Person
DAY -1					
1	09.08.18	1,2	9 AM -11 AM	Wired access technologies	Dr.S.Thamizharasan & Dr.K.H.Shakthimurugan
2		3,4	11.15 AM – 1.15 PM	Phone line modem, ISDN modem	Dr.S.Thamizharasan
3		5,6	2 PM -4 PM	DSL, fiber and wireless access technologies.	Dr.K.H.Shakthimurugan
DAY 2					
4	10.08.18	7,8	9 AM -11 AM	Last mile copper access	Dr.S.Thamizharasan
5		9,10,	11.15 AM – 1.15 PM	Flavors of Digital subscriber lines	Dr.K.H.Shakthimurugan
6		11,12	2 PM -4 PM	Common local loop impairments, discrete multi-tone modulation	Dr.S.Thamizharasan
DAY -3					
7	11.08.18	13,14	9 AM -11 AM	VDSL deployment and frequency plans.	Dr.K.H.Shakthimurugan
8		15,16	11.15 AM – 1.15 PM	Standards for XDSL and comparison. Last mile HFC access,	Dr.S.Thamizharasan
9		17,18	2 PM -4PM	Cable modems. Modulation schemes, DOCSIS. Standards	Dr.K.H.Shakthimurugan
DAY -4					
10	12.08.18	19,20	9AM -11AM	. Standards- comparison, physical	Dr.S.Thamizharasan
11		21,22	11.15AM – 1.15 PM	HFC networks, ATM and IP-centric modem. Switched digital video.	Dr.K.H.Shakthimurugan
12		23,24	2 PM -4PM	Fiber access technologies and architectures. ATM passive optical networks	Dr.S.Thamizharasan



Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
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## COLLEGE OF ENGINEERING AND TECHNOLOGY

[Approved by AICTE, New Delhi & Affiliated to Pandicherry University]

DAY -5					
13	13.08.18	25,26	9AM -11AM	Ethernet passive optical network, Gigabit passive optical networks.	Dr.K.H.Shakthimurugan
14		27,28	11.15AM – 1.15 PM	LMDS,MMDS,WIMAX and WIFI, Satellite technologies	Dr.S.Thamizharasan
15		29,30	2 PM -4PM	Wireless LAN, Wireless personal area networking, 3G and 4G wireless systems.	Dr.K.H.Shakthimurugan

\*\*\*ASSESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION \*\*\*\*

BREAK TIME: 11.00 TO 11.15 AM

LUNCH BREAK: 1.15 PM TO 2.00 PM

COURSE DESIGNED BY  
Ms. P. VISHNUPRIYA

APPROVED BY  
SKILL DEVELOPMENT TEAM

PRINCIPAL



  
Dr. S. SEENUVASAMURTHI, M.E., Ph.C.  
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## COLLEGE OF ENGINEERING AND TECHNOLOGY

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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

### EVENT REPORT

Name of the Course 18ECE02-Broadband access technologies

Name of the Instructors: Dr.S.Thamizharasan & Dr.K.H.Shakthimurugan

Year/ Branch: III/ECE

Duration of Course: 30 Hours (09-08-2018 to 14-08-2018)

Assessment Date: 20.08.2018

#### Post Event Summary:


The course was inaugurated on 09-08-2018 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2018 assessment was conducted and feedbacks were collected from all the participants.

#### CO - Attainment:

- CO1: Recall and identify the basics of broadband technology systems and differentiate the differences between the various wired and wireless technology system
- CO2: Illustrate the aspects of last mile data transport on copper wire networks and flavors of DSL
- CO3: Summarize the versions of cable network standard and MAC protocols for HFC networks
- CO4: Distinguish the cost effective broadband services for residential users and ATM based and Ethernet based passive optical networks



  
Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
PRINCIPAL  
RAAK College of Engineering & Technology  
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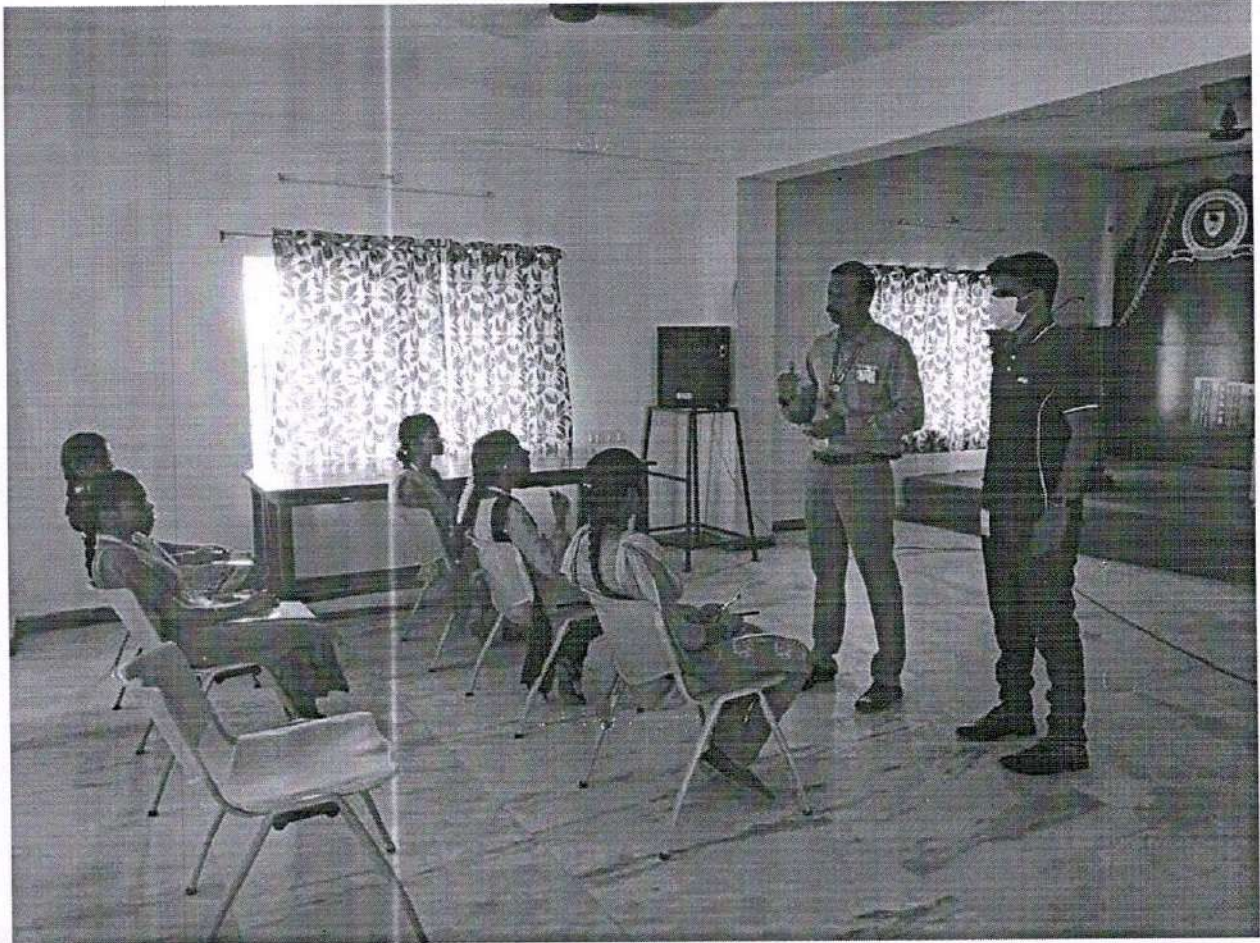


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## COLLEGE OF ENGINEERING AND TECHNOLOGY


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### Value Added Course on Broadband access technologies 2018-19



HFC networks, ATM and IP-centric modem. Switched digital video on 12.08.18



  
Dr. S. SENUVASAMURTHI, M.E., Ph.D.  
PRINCIPAL

RAAK College of Engineering & Technology  
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Puducherry - 605 110



# RAAK

## COLLEGE OF ENGINEERING AND TECHNOLOGY

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From

01/08/2018

Mr. S. Dhinesh

Assistant Professor, ECE

RAAK College of Engineering and Technology

Puducherry -110

To

The Principal

RAAK College of Engineering and Technology

Puducherry -110

Respected Sir,

Sub: Requisition for Approval to Conduct Skill Development program/Value added Course on **"18ECE03- Principles of Radar"**-reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on **"18ECE03- Principles of Radar"** for all the Second Year Electronics and Communication Engineering students from 09-08-2018 to 13-08-2018.

The main focus of this program is to provide a better exposure to our students on the Principles of Radar

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

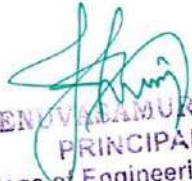
Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully,

Mr. S. Dhinesh  
AP/ECE



  
Dr. S. SEENUVAMURTHI, M.E., Ph.D.  
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## COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)

RAAKCET/PRINCIPAL/CIR/AUG2018

02/08/2018

### CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on "18ECE03- Principles of Radar" for all the Second Year ECE Department students from 09-08-2018 to 13-08-2018. Students are asked to utilize this opportunity and improve their skills

PRINCIPAL

Circulation to:

1. All Students
2. All Faculty & Staff Members
3. All HoDs

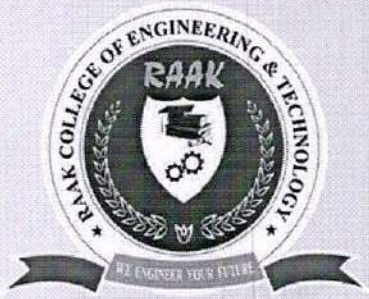
Copy to:

1. All HoDs
2. Office



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## COLLEGE OF ENGINEERING & TECHNOLOGY

( Approved by AICTE, New Delhi, Affiliated to Pondicherry University )  
NO:1, MUTHUPILLAI PALAYAM ROAD, G.N. PALAYAM, VILLIYANUR, PUDUCHERRY - 605 110

### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING PRESENTS

### VALUE ADDED COURSE ON PRINCIPLES OF RADAR

**2018-2019**

**DATE: 09/08/2018 to 13/08/2018**

**VENUE: RAAKCET**

**TIME: 09 am to 04 pm**

**Resource Person:**

**Dr. S. Thamizharasan**

**Assistant Professor,**

**Sri Vengateshwara college of Engg & Tech.**

**For Registration Contact:**

**Mr. Krishnadass , AP/ ECE.,**

**7854658918.**

**HOD**

**Mr. Ayyapasamy**



**PRINCIPAL**

**Dr. A. Sivakumar**

**Dr. S. SEENUVASAMURTHI, M.E., Ph.C.**  
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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

18ECE03- Principles of Radar

Syllabus

Duration: 30 hours

#### Course Objective:

- To expose the students to the working principles of a radar from a signal processing perspective.

#### Course Outcome:

Upon successful completion of the course students able to

- Understand the principle behind radar range equation and different types of targets available.
- Appreciate the different compression techniques of radar pulse signals.
- Distinguish between different detection methods of radar signals.
- Appreciate the building blocks for optimum receiver and Doppler measurements.

#### Module 1:

(9 Hours)

Radar equation. Radar cross section. Cross section of small targets. Target scattering matrices. Area and volume targets.

#### Module 2:

(9 Hours)

Linear FM pulse. Pulse compression by Costas FM and binary phase coding. Radar signals. Ambiguity function and its properties. Uncertainty principle. Pulse compression.

#### Module 3:

(9 Hours)

Radar detection. Optimum Bayesian decision rules. Detection criteria for different target models.

#### Module 4:

(9 Hours)

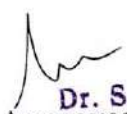

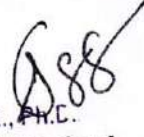
Range and Doppler measurements and tracking. Range and Doppler frequency resolutions. Optimum receivers. Optimum filters for Doppler measurements. Coherent and non-coherent implementations.

#### Module 5:

(9 Hours)

Angle measurement and tracking. Angle measurement and tracking by conical scan and mono pulse. Optimum mono pulse systems.



Approved by     
Dr. S. SEENUVASAMURTHI, M.E., Ph.D.  
PRINCIPAL Principal

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### CO - ATTAINMENT MAPPING

Sl. No	Register Number	Student Name	CO1	CO2	CO3	CO4
1	17TC2204	ANITHA R	✓	✓	✓	✓
2	17TC2205	DEEPA M	✓	✓	✓	✓
3	17TC2206	DEEPIKA M	✓	✓	✓	✓
4	17TC2207	DEIVAYANAI V	✓	✓	✓	✓
5	17TC2208	IYYAPPAN K	✓	✓	✓	✓
6	17TC2209	KALAIYARASI G	✓	✓	✓	✓
7	17TC2210	KEERTHANA K	✓	✓	✓	✓
8	17TC2211	KEERTHANA K	✓	✓	✓	✓
9	17TC2213	NILAVARASI R	✓	✓	✓	✓
10	17TC2212	MUTHULAKSHMI N	✓	✓	✓	✓
11	17TC2215	NITHIYAKUMARI J	✓	✓	✓	✓



  
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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

18ECE03- Principles of Radar

### COURSE PLAN

S.no	Date	Hours	Time	Topic	Faculty details
DAY -1					
1	09.08.18	1,2	9 AM -11 AM	Radar equation. Radar cross section	Dr.K.H.Shakthimurugan & Dr.S.Thamizharasan
2		3,4	11.15 AM – 1.15 PM	Cross section of small targets. Target scattering matrices.	Dr.K.H.Shakthimurugan
3		5,6	2 PM -4 PM	Area and volume targets	Dr.S.Thamizharasan
DAY 2					
4	10.08.18	7,8	9 AM -11 AM	binary phase coding.Radar signals..	Dr.K.H.Shakthimurugan
5		9,10,	11.15 AM – 1.15 PM	Linear FM pulse. Pulse compression by Costas FM and	Dr.S.Thamizharasan
6		11,12	2 PM -4 PM	Ambiguity function and its properties	Dr.K.H.Shakthimurugan
DAY -3					
7	11.08.18	13,14	9 AM -11 AM	Uncertainty principle. Pulse compression	Dr.S.Thamizharasan
8		15,16	11.15 AM – 1.15 PM	Radar detection. Optimum Bayesian decision rules.	Dr.K.H.Shakthimurugan
9		17,18	2 PM -4 PM	Detection criteria for different target models	Dr.S.Thamizharasan
DAY -4					
10	12.08.18	19,20	9 AM -11 AM	Range and Doppler measurements and tracking	Dr.K.H.Shakthimurugan
11		21,22	11.15 AM – 1.15 PM	. Range and Doppler frequency resolutions. Optimum receivers.	Dr.S.Thamizharasan
12		23,24	2 PM -4 PM	Optimum filters for Doppler measurements. Coherent and non-coherent	Dr.K.H.Shakthimurugan



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				implementations	
DAY -5					
13	13.08.18	25,26	9 AM -11 AM	Angle measurement and tracking	Dr.S.Thamizharasan
14		27,28	11.15 AM – 1.15 PM	Angle measurement and tracking by conical scan	Dr.K.H.Shakthimurugan
15		29,30	2 PM -4 PM	mono pulse. Optimum mono pulse systems	Dr.S.Thamizharasan
***ASSESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION ****					

BREAK TIME: 11.00 TO 11.15 AM

LUNCH BREAK: 1.15 PM TO 2.00 PM

COURSE DESIGNED BY  
Mr. S. DHINESH

APPROVED BY  
SKILLDEVELOPMENTTEAM

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### VALUE ADDED COURSES

2018-2019

Department of Electronics and Communication Engineering

### EVENT REPORT

Name of the Course 18ECE03-Principles of Radar

Name of the Instructors: Dr.K.H.Shakthimurugan & Dr.S.Thamizharasan

Year/ Branch: II/ECE

Duration of Course: 30 Hours (09-08-2018 to 13-08-2018)

Assessment Date: 20.08.2018

#### Post Event Summary:


The course was inaugurated on 09-08-2018 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2018 assessment was conducted and feedbacks were collected from all the participants.

#### CO - Attainment:

- CO1: recall and identify the basics of broadband technology systems and differentiate the differences between the various wired and wireless technology system
- CO2: illustrate the aspects of last mile data transport on copper wire networks and flavors of DSL
- CO3: summarize the versions of cable network standard and MAC protocols for HFC networks
- CO4: distinguish the cost effective broadband services for residential users and ATM based and Ethernet based passive optical networks.



  
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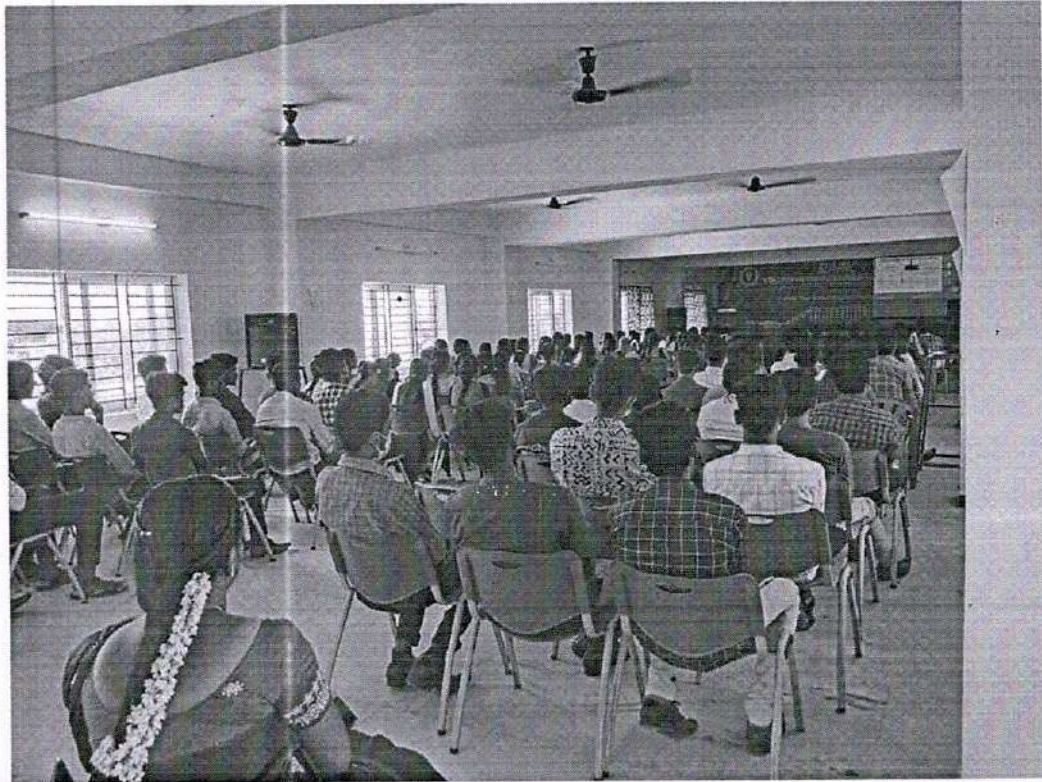


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### Value Added Course on Principles of Radar 2018-19



Radar detection. Optimum Bayesian decision rules on 11.08.18



  
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