

Dt:01.12.2022

From

**Mr.S.Rajeev**

Department of Electronics and Communication Engineering  
University College of Engineering and Technology,  
Krishna University  
Machilipatnam-521004.

To

**The Principal**

University College of Engineering and Technology  
Krishna University  
Machilipatnam-521004

(THROUGH PROPER CHANNEL)

Respected Sir,

Sub: Request permission to conduct a Value Added Course to the Electronics and Communication Engineering 1<sup>st</sup> semester students admitted in the 2022-23 academic year-Reg.

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With reference to the above subject cited, I request you to grant permission to conduct two weeks Value Added Course (VAC) to the Electronics and Communication Engineering 2<sup>nd</sup> Year students admitted in the 2021-22 academic year on "Pulse and digital circuits". The proposed course work is scheduled from 07-12-2022 to 20-12-2022.

I, **Mr.S.Rajeev** am the Co-Ordinator for this Value Added Course. The details of the Value Added Course are enclosed with this letter.

A brief report including the Student enrolment, attendance will be submitted to your office immediately after the completion of the Value Added Course.

In this connection, I request you to permit me to start the above said Value Added Course.

Thanking You,

Yours Sincerely,

  
(**Mr.S.Rajeev**)

Enclosure: Details of Value Added Course

## Krishna University College of Engineering & Technology

Department of Electronics and Communication Engineering

Krishna University, Machilipatnam-521004

### Proposed Value Added Course (VAC) to Batch 2<sup>nd</sup> - ECE Students of the 2021-22 Admitted batch

Duration: **2 weeks**

Date of commencement: 07-12-2022 to 20-12-2022

Name of the Course Coordinator: **MR.S. Rajeev**

Name of the Course: Pulse and Digital Circuits

Mode of Classes: **Offline**

Course code: ECVAC003

**Objectives of the Course:** This Course Provides The Knowledge On Linear And Nonlinear Wave Shaping Circuits, Switching Characteristics Of Diode And Transistor. This Course Also Gives an Idea about Operation, Analysis and Design of Different Types of Multi-Vibrator Circuits, Time Base Generators and Sampling Gates.

#### **Modules of the Course:**

Non-Linear Wave Shaping: Diode Clippers, Transistor Clippers, Clipping at Two Independent Levels, Comparators, Applications of Voltage Comparators .Clamping Operation, Clamping Circuit taking Source and Diode resistances into account, Clamping circuit, Theorem, Practical Clamping Circuits, Effect of Diode Characteristics on Clamping voltage, Synchronized Clamping

Multi Vibrators: Analysis and Design of Bistable, Monostable, Astable Multi Vibrators and Schmitt Trigger Using Transistors. Time base generators: General features of a Time base Signal, Methods of Generating Time Base Waveform, Miller and Bootstrap Time Base Generators-Basic Principles, Transistor Miller Time Base Generator, Transistor Bootstrap Time Base Generator, Transistor Current Time Base Generators, Methods of Linearity Improvement.

#### **Outcomes of the course:**

- Analyze The Output Characteristics Of Linear Circuits For Different Test Signals.
  - Develop Non Linear Circuits Like Clippers And Clampers Using Active And Passive Elements.
  - Examine The Switching Characteristics Of Nonlinear Elements Used In Various Digital Circuits.
  - Design Various Multi Vibrator Circuits.
- Illustrate the Operation of Various Time Base Generator Circuits And Sampling Gates

| S.NO | DATE       | TOPICS COVERED                                   |
|------|------------|--------------------------------------------------|
| 1    | 07-12-2022 | Diode Clippers, Transistor Clippers              |
| 2    | 08-12-2022 | Clipping at Two Independent Levels               |
| 3    | 09-12-2022 | Comparators, Applications of Voltage Comparators |
| 4    | 10-12-2022 | Clamping Operation, Clamping Circuit taking      |

|    |            |                                                                                                                                                                               |
|----|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |            | Source and Diode resistances into account, Clamping circuit, Theorem, Practical Clamping Circuits, Effect of Diode Characteristics on Clamping voltage, Synchronized Clamping |
| 5  | 12-12-2022 | Analysis and Design of Bistable                                                                                                                                               |
| 6  | 13-12-2022 | Monostable , Astable Multi Vibrators and Schmitt Trigger Using Transistors.                                                                                                   |
| 7  | 14-12-2022 | Time base generators ;General features of a Time base Signal                                                                                                                  |
| 8  | 15-12-2022 | Methods of Generating Time Base Waveform, Miller And Bootstrap Time Base Generators-Basic Principles                                                                          |
| 9  | 16-12-2022 | Transistor Miller Time Base Generator                                                                                                                                         |
| 10 | 17-12-2022 | Transistor Bootstrap Time Base Generator                                                                                                                                      |
| 11 | 19-12-2022 | Transistor Current Time Base Generators, Methods Of Linearity Improvement.                                                                                                    |

# **Krishna University College of Engineering & Technology**

Department of Electronics and Communication Engineering

Krishna University, Machilipatnam-521004

## **Proposed Value Added Course (VAC) to B.Tech 2<sup>nd</sup> Year - ECE** **students of the 2021-22 Admitted batch**

Duration: 2 weeks (three hours per day)

Date of commencement: 07-12-2022 to 20-12-2022

Name of the Course Coordinator: **Mr. S.Rajeev**

Name of the Course: Pulse and Digital Circuits

Mode of Classes: **Offline**

Course code: ECVAC003

**Objectives of the Course:** This course provides the knowledge on linear and nonlinear wave shaping circuits, switching characteristics of diode and transistor. This course also gives an idea about operation, analysis and design of different types of multi-vibrator circuits, time base generators and sampling gates.

### **Modules of the Course:**

Non-Linear Wave Shaping : Diode clippers, Transistor clippers, Clipping at two independent levels, Comparators, Applications of Voltage comparators. Clamping Operation, Clamping circuit taking Source and Diode resistances into account, Clamping Circuit Theorem, Practical Clamping Circuits, Effect of Diode Characteristics on Clamping Voltage, Synchronized Clamping

Multi vibrators : Analysis and Design of Bistable, Monostable, Astable Multi vibrators and Schmitt trigger using Transistors. Time Base Generators :General features of a Time base Signal, Methods of Generating Time Base Waveform, Miller and Bootstrap Time base Generators-Basic Principles, Transistor Miller Time Base generator, Transistor Bootstrap Time Base Generator, Transistor Current Time Base Generators, Methods of Linearity improvement.

### **Outcomes of the course:**

- Analyze the output characteristics of linear circuits for different test signals.
- Develop nonlinear circuits like clippers and clampers using active and passive elements.
- Examine the switching characteristics of nonlinear elements used in various digital circuits.
- Design various multi vibrator circuits.

Illustrate the operation of various time base generator circuits and sampling gates.

# KRISHNA UNIVERSITY

## College of Engineering & Technology

Dr.M.Babu Reddy

Ph.D.

Principal (FAC)



Rudravaram,

Machilipatnam-521 004

Phone No: 9154281361

E-mail:principal.krucet@gmail.com

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Dt:03.12.2022

### **CIRCULAR**

A two week value added course entitled "Pulse and Digital Circuits" has been introduced by the Department of Electronics and Communication Engineering for the Academic Year 2022-23 for 2<sup>nd</sup> year ECE students. All the 2<sup>nd</sup> year ECE students are hereby informed that to enroll/register for the value added course conducted by the department. The course duration is for 30 hours from 07-12-2022 to 20-12-2022 and gets information of course details from the Department of Electronics and Communication Engineering.

**PRINCIPAL**

Copy to:

Department of Electronics & Communication Engineering  
File.



**KRISHNA UNIVERSITY**

**UNIVERSITY COLLEGE OF ENGINEERING &  
TECHNOLOGY, MACHILIPATNAM-521004**

**TWO WEEK VALUE ADDED COURSE  
ON**

**PULSE and DIGITAL CIRCUITS**

**From 07-12-2022 to 20-12-2022**

**Organized by**

**Department of Electronics & Communication  
Engineering**

**Chief Patron  
Dr.M.Babu Reddy**

**Principal  
KRUCET, Krishna University**

**Patron  
Mr.CH.Vijaya Sekhar Babu**

**Head of the Department  
Electronics & Communication Engineering**

**Course Coordinator  
Mr.S.Rajeev**



# KRISHNA UNIVERSITY

## UNIVERSITY COLLEGE OF ENGINEERING & TECHNOLOGY

### Department of Electronics & Communication Engineering

#### MACHILIPATNAM-521004

Two weeks Value Added Course on "Pulse and Digital Circuits" to the B.Tech – 2<sup>nd</sup> year - ECE students of academic year 2022-23 From 07-12-2022 to 20-12-2022.

#### Student Enrollment Form

Name of the Coordinator: **Mr.S.Rajeev**  
Designation: Assistant Professor(Contract)

Date: 06.12.2022

| S.No. | Name of the Student                 | Regd.No.     | Signature of the Student |
|-------|-------------------------------------|--------------|--------------------------|
| 1     | ANGALAKURTHI AKASH                  | Y21ECE279001 | A. AKASH                 |
| 2     | BUSIREDDY MEGHANATH REDDY           | Y21ECE279002 | B. Meghanath             |
| 3     | CHAVALA LAKSHMI SWAMY               | Y21ECE279004 | C. Lakshmi Swamy         |
| 4     | CHITTURI DHAKSHINYA                 | Y21ECE279006 | Ch. Dhakshinya           |
| 5     | CHITTURI SINDHUSRI                  | Y21ECE279007 | Ch. Sindhu Sri           |
| 6     | DASARI JHANSI LAKSHMI               | Y21ECE279008 | D. Jhansi Lakshmi        |
| 7     | DEVANURI REVATHI                    | Y21ECE279009 | D. Revathi               |
| 8     | GUDISE PAVANI                       | Y21ECE279011 | G. Pavani                |
| 9     | JONUBOYINA SREE BHARGAVI            | Y21ECE279013 | J. Sree Bhargavi         |
| 10    | KAGITA NAGA JAGADEESH KANTH         | Y21ECE279014 | K. Jagadeesh Kanth       |
| 11    | KAGITHA DEVI TIRUPATAMMA            | Y21ECE279015 | K. Devi Tirupatamma      |
| 12    | KOLLURI VENKATA SAI GEETHIKA        | Y21ECE279016 | K. V. S. Geethika        |
| 13    | KOMERLA PRASANTH KUMAR              | Y21ECE279017 | K. Prasanth Kumar        |
| 14    | PALANKI NAGA LAKSHMI                | Y21ECE279023 | P. Nagalakshmi           |
| 15    | POTHUKUCHI SREE SHANMUKHA SAI PRIYA | Y21ECE279026 | S. Priya                 |
| 16    | RUTTALA SAMPATH MONIKA              | Y21ECE279027 | R. S. Monika             |

|    |                                     |              |                     |
|----|-------------------------------------|--------------|---------------------|
| 17 | SEEPANI SAI KIRAN                   | Y21ECE279028 | S. Sai Kiran        |
| 18 | TOKALA CHAITANYA                    | Y21ECE279032 | T. Chaitanya        |
| 19 | VADDADI DEVI SIVA KUMAR             | Y21ECE279033 | V. DSD              |
| 20 | VALISETTY VANITHA                   | Y21ECE279034 | V. Vanitha          |
| 21 | VELAGAPALLI DEEPIKA                 | Y21ECE279035 | V. Deepika          |
| 22 | YELLAMMAGARI SAI KEERTHAN           | Y21ECE279037 | Y. Sai Keerthana    |
| 23 | YENDURI VEERA VENKATA NAGA BHARGAVI | Y21ECE279038 | Y.V.V.N. Bhargavi   |
| 24 | ANKANI MANJU PRIYA                  | L22ECE279003 | A. Manju Priya      |
| 25 | BATHALA ANUSHA                      | L22ECE279005 | B. Anusha           |
| 26 | BODDU SYAM BABU                     | L22ECE279006 | B. Syam Babu        |
| 27 | BOGA SAI KRISHNA                    | L22ECE279007 | B. Sai Krishna      |
| 28 | CHALLA LAKSHMI NAGA CHARISHMA       | L22ECE279008 | Ch. L. N. Charishma |
| 29 | DULLA RAJA TEJASWINI                | L22ECE279010 | D. Raja Tejaswini   |
| 30 | GANDIPUDI SUMITHARA                 | L22ECE279011 | G. Sumithra         |
| 31 | GANTI GURU VISWESWARA SAI           | L22ECE279012 | G. G. V. SAI        |
| 32 | GUDDANTI REVANTH VARA PRASAD        | L22ECE279013 | G. Revanth          |
| 33 | JALLI SRAVANI                       | L22ECE279015 | J. Sravani          |
| 34 | KARUMURI VARUN                      | L22ECE279016 | K. Varun            |
| 35 | KOLLURU VARSHA                      | L22ECE279017 | K. Varsha           |
| 36 | KOORAKULA MANI KONDALU              | L22ECE279018 | K. MANI KONDALU     |
| 37 | MANEPALLI USHA DEVI                 | L22ECE279019 | M. Usha Devi        |
| 38 | NAMBURI LAKSHMI SURYA PRAKASH       | L22ECE279022 | N. L. SURYA         |
| 39 | PAMARTHI MEGHANA                    | L22ECE279023 | P. Meghana          |
| 40 | PONNAMANDA BALAJI                   | L22ECE279025 | P. Balaji           |
| 41 | SAIDU GOMUKHI                       | L22ECE279026 | S. Gomukhi          |
| 42 | SHAIK AFROJ                         | L22ECE279027 | Sh. Afroj           |

G. V. Sreeshan  
Signature of the HOD



**KRISHNA UNIVERSITY**  
**UNIVERSITY COLLEGE OF ENGINEERING & TECHNOLOGY**  
**MACHILIPATNAM-521004**  
**Department of Electronics & Communication Engineering**

Two weeks Value Added Programme on Pulse and Digital Circuits" to the B.Tech 2<sup>nd</sup> year - ECE students of academic year 2022-23 from 07-12-2022 to 20-12-2022

## Attendance Sheet

[illegible]

[illegible]

[illegible]

|    |                   |              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----|-------------------|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | PAMARTHI MEGHANA  | L22ECE279023 | ✓ | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 40 | PONNAMANDA BALAJI | L22ECE279025 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 41 | SAIDU GOMUKHI     | L22ECE279026 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | ✓ | ✓ | ✓ |
| 42 | SHAIK AFROJ       | L22ECE279027 | ✓ | ✓ | A | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

 **Signature of the Programme Coordinator**

 **Signature of the Resource Person**



**KRISHNA UNIVERSITY**  
**UNIVERSITY COLLEGE OF ARTS AND SCIENCE**  
**Rudravaram, Machilipatnam-521004**

Department of Electronics & Communication Engineering Organized  
A two week value added programme on Pulse and Digital Circuits

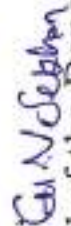
## Certificate

This is to certify that Mr./Mrs. Gudise Pavani with Regd. No Y21EECC279011 of II B.Tech, Department of **Electronics & Communication Engineering**, University College of Engineering & Technology, Machilipatnam has successfully completed the Two Weeks Value Added Course on "Pulse and Digital Circuits" organized by Department of **Electronics & Communication Engineering**, University College of Arts and Science, Krishna University, Machilipatnam from 07-12-2022 to 20-12-2022.

Programme Coordinator

  
Principal

University College of Engineering & Technology  
Krishna University  
Rudravaram, Machilipatnam-521004

  
Head of the Department



**KRISHNA UNIVERSITY**  
**UNIVERSITY COLLEGE OF ARTS AND SCIENCE**  
**Rudravaram, Machilipatnam-521004**

Department of Electronics & Communication Engineering Organized  
A two week value added programme on Pulse and Digital Circuits

## Certificate

This is to certify that Mr./Mrs. **SEEPANI SAI KIRAN** with Regd. No **Y21ECE279028** of II B.Tech, Department of **Electronics & Communication Engineering**, University College of Engineering & Technology, Machilipatnam has successfully completed the Two Weeks Value Added Course on "Pulse and Digital Circuits" organized by Department of **Electronics & Communication Engineering**, University College of Arts and Science, Krishna University, Machilipatnam from 07-12-2022 to 20-12-2022.

Programme Coordinator

Principal

Principal  
University College of Engineering & Technology  
Krishna University  
Rudravaram

Head of the Department



**KRISHNA UNIVERSITY**  
**UNIVERSITY COLLEGE OF ARTS AND SCIENCES**  
**MACHILIPATNAM-521004**

**Department of Electronics & Communication Engineering**

Submission of a brief report on two weeks value added course on “ **Pulse and Digital Circuits**” to the 2<sup>nd</sup> year ECE students admitted in the academic year 2022-23 from 07-12-2022 to 20-12-2022.

**Date:** 15-07-2022

Name of the course coordinator/Resource person: **Mr.S.Rajeev**

Department of Electronics & Communication Engineering

Phone Number :9298409859

Email: mtech3826@gmail.com

**Brief report**

This course provides the knowledge on linear and nonlinear wave shaping circuits, switching characteristics of diode and transistor. This course also gives an idea about operation, analysis and design of different types of multi-vibrator circuits, time base generators and sampling gates.

Analyze and Design linear wave shaping circuits and non linear wave shaping circuits.  
Analyze and Design Multivibrator circuits using Transistors

A two week value-added course on **Pulse and digital circuits** was organized by the Department of Electronics and Communication Engineering from 07-12-2022 to 20-12-2022 for II years ECE Students in our college. The course was conducted for two week duration in offline platform in Krishna University College of Engineering & Technology, Rudravaram.

  
**Signature Coordinator**