




VIGNAN'S LARA
INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)

Approved by AICTE New Delhi & Affiliated to JNTUK Kakinada
Accredited by NAAC 'A+' and NBA | ISO 9001 : 2015
Vadlamudi - 522 213, Guntur District

Display of Program Outcomes (PO's) and Course Outcomes(CO's)

S.NO.	CONTENTS	PAGE NO.
1	PO's Displayed at Classrooms	2
2	PO's Displayed at Library	3
3	PO's Displayed at Notice Board	4
4	PO's Displayed in Course File	5
5	PO's Displayed at Laboratories	6
6	PO's Displayed at Website under each department	7
7	CO's Displayed at Website in Syllabus copy	8-10


Dr. K. Phaneendra Kumar
M.Tech;Ph.D.,

PRINCIPAL

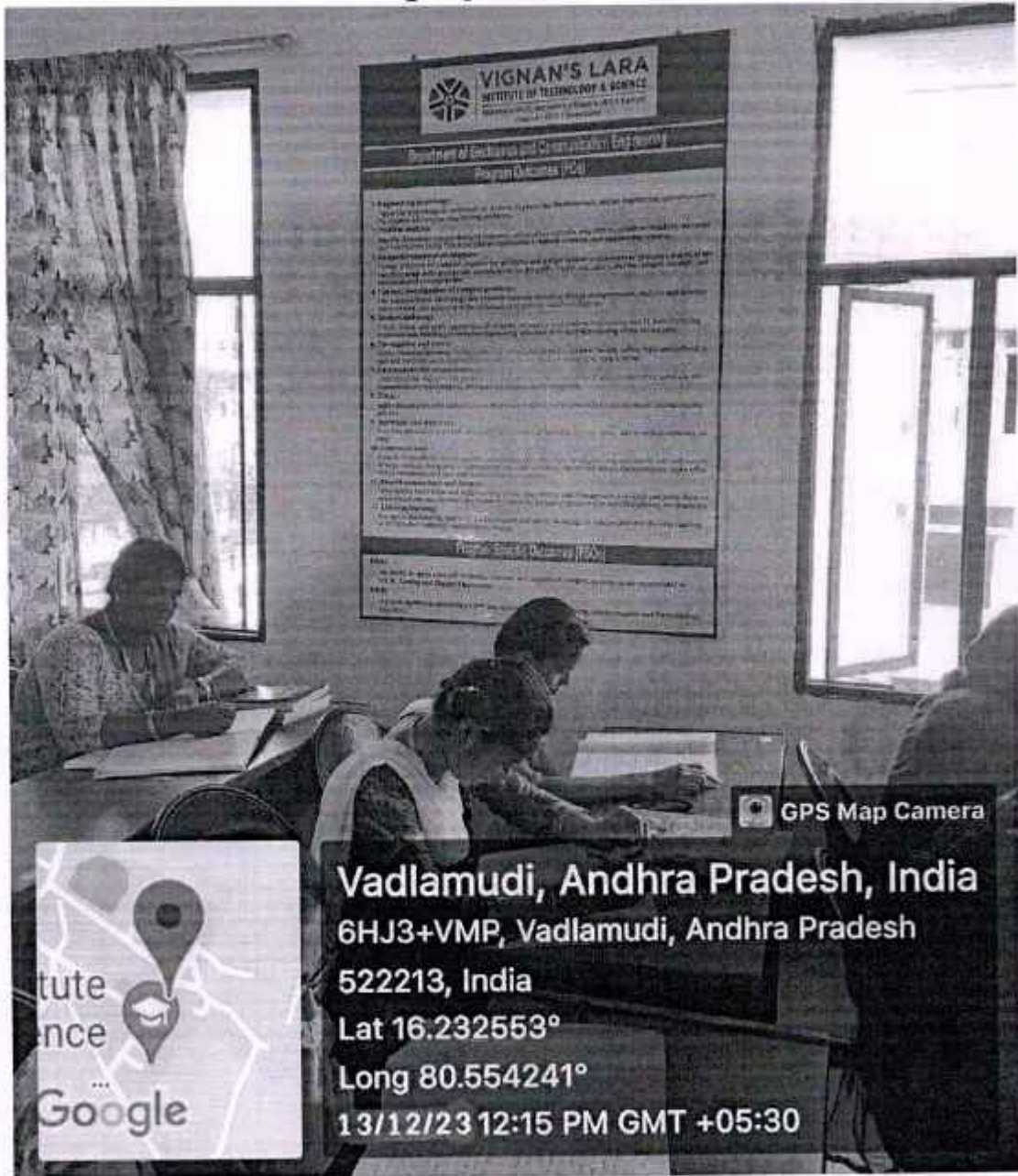
Vignan's Lara Institute of Technology & Science
VADLAMUDI-522 213, Guntur, A.P., India



VIGNAN'S LARA
INSTITUTE OF TECHNOLOGY & SCIENCE
 (AUTONOMOUS)

Approved by AICTE New Delhi & Affiliated to JNTUK Kakinada
 Accredited by NAAC 'A+' and NBA | ISO 9001 : 2015
 Vadlamudi - 522 213, Guntur District

PO's Displayed at Classrooms



Vadlamudi, Andhra Pradesh, India
 6HJ3+VMP, Vadlamudi, Andhra Pradesh
 522213, India
 Lat 16.232553°
 Long 80.554241°
 13/12/23 12:15 PM GMT +05:30

CK

Dr. K. Phaneendra Kumar
 M.Tech;Ph.D.,

PRINCIPAL

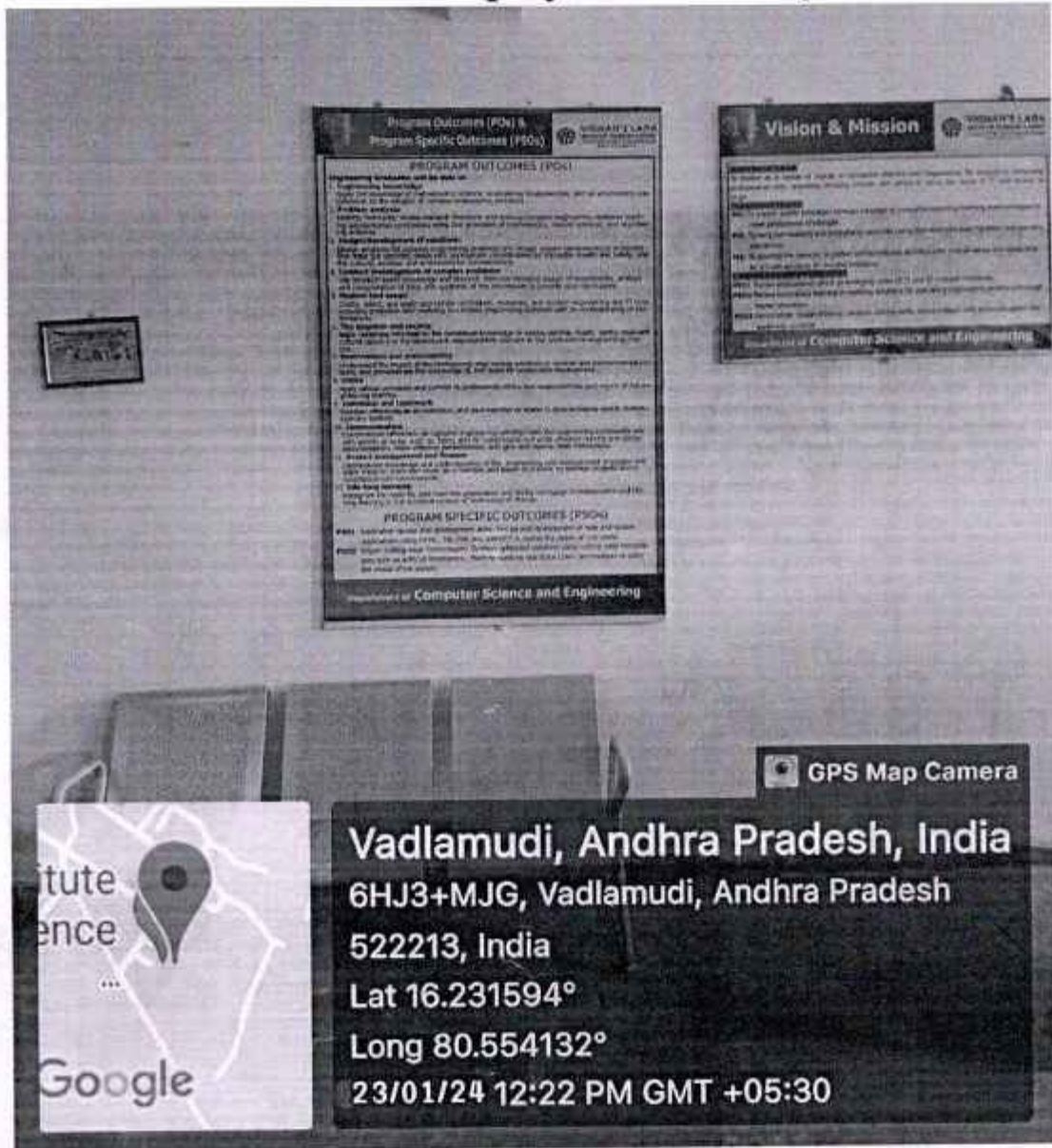
Vignan's Lara Institute of Technology & Science
 VADLAMUDI-522 213, Guntur, A.P., India



VIGNAN'S LARA
INSTITUTE OF TECHNOLOGY & SCIENCE
 (AUTONOMOUS)

Approved by AICTE New Delhi & Affiliated to JNTUK Kakinada
 Accredited by NAAC 'A+' and NBA | ISO 9001 : 2015
 Vadlamudi - 522 213, Guntur District

PO's Displayed at Library




Chb
Dr. K. Phaneendra Kumar
 M.Tech;Ph.D.,
 PRINCIPAL
 Vignan's Lara Institute of Technology & Science
 VADLAMUDI-522 213, Guntur, A.P., India



VIGNAN'S LARA
INSTITUTE OF TECHNOLOGY & SCIENCE
 (AUTONOMOUS)

Approved by AICTE New Delhi & Affiliated to JNTUK Kakinada
 Accredited by NAAC 'A+' and NBA | ISO 9001 : 2015
 Vadlamudi - 522 213, Guntur District

PO's Displayed in Notice Boards



VIGNAN'S LARA
INSTITUTE OF TECHNOLOGY & SCIENCE
Approved by AICTE New Delhi & Affiliated to JNTUK Kakinada
 Vadlamudi - 522 213, Guntur District

Department of Electronics and Communication Engineering


Program Outcomes (POs)

1. **Engineering knowledge:**
Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:**
Identify, formulate, review research literature, and analyze complex engineering problems reaching substantial and conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:**
Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate considerations for the public health and safety, and the cultural, societal, and environmental constraints.
4. **Conduct investigations of complex problems:**
Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:**
Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:**
Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and ethical issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:**
Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for, sustainable development.
8. **Ethics:**
Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and teamwork:**
Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:**
Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:**
Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:**
Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1
An ability to apply concepts to design, simulate and implement complex systems in the areas related to VLSI, Analog and Digital Electronics

PSO2
Analyze, synthesize and design electronic systems for signal processing, communication and Embedded applications.

 **GPS Map Camera**



Vadlamudi, Andhra Pradesh, India
6HJ3+HH6, Vadlamudi, Andhra Pradesh
522213, India
Lat 16.231339°
Long 80.553889°
24/02/24 12:32 PM GMT +05:30

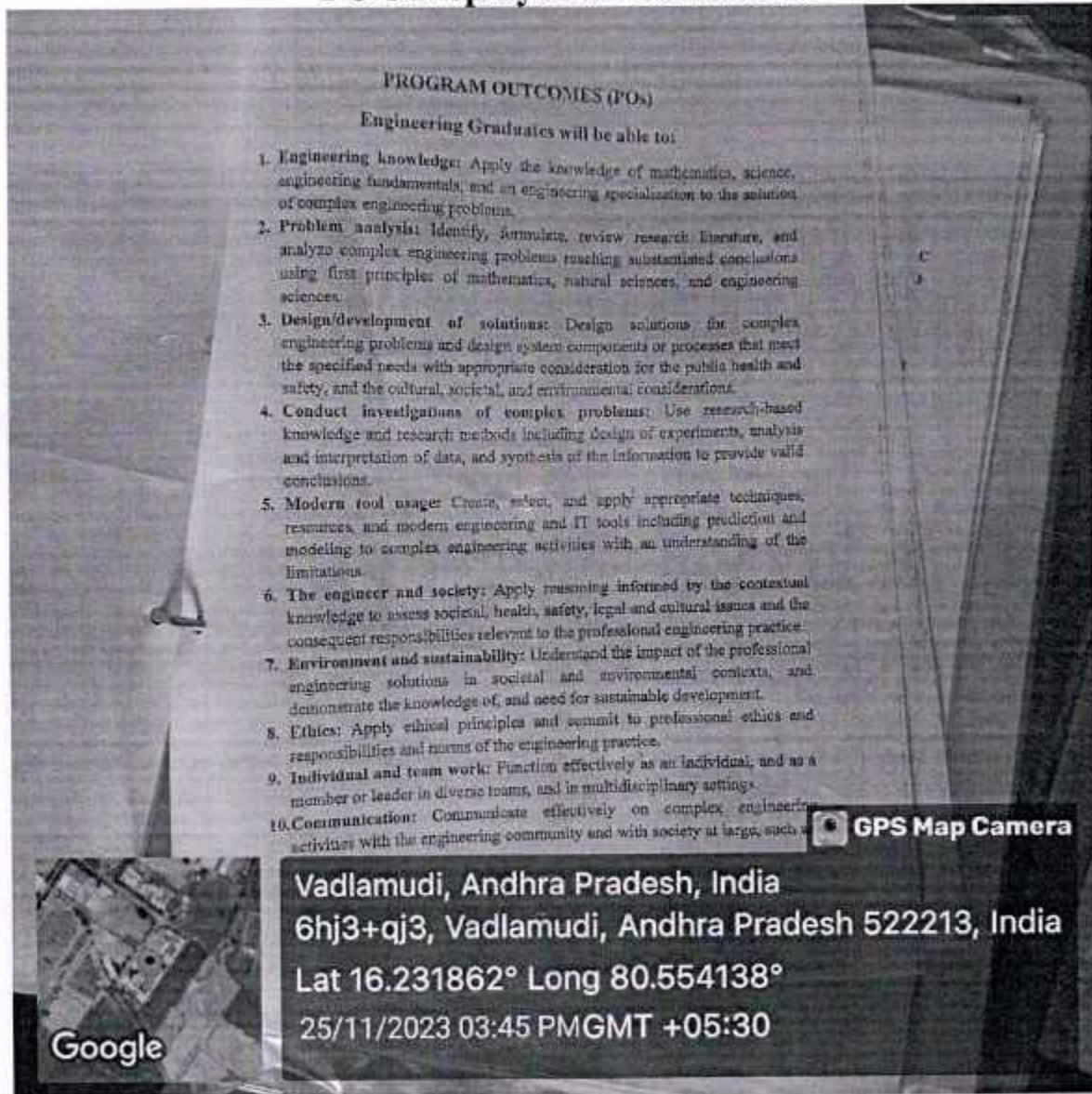
Dr. K. Phaneendra Kumar,
M.Tech; Ph.D.,
PRINCIPAL
Vignan's Lara Institute of Technology & Science
VADLAMUDI-522 213, Guntur, A.P., India



VIGNAN'S LARA INSTITUTE OF TECHNOLOGY & SCIENCE (AUTONOMOUS)

Approved by AICTE New Delhi & Affiliated to JNTUK Kakinada
Accredited by NAAC 'A+' and NBA | ISO 9001 : 2015
Vadlamudi - 522 213, Guntur District

PO's Displayed in Course File



PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for, sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as

GPS Map Camera

Vadlamudi, Andhra Pradesh, India
6hj3+qj3, Vadlamudi, Andhra Pradesh 522213, India
Lat 16.231862° Long 80.554138°
25/11/2023 03:45 PM GMT +05:30

Google

(Handwritten Signature)
Dr. K. Phaneendra Kumar
M.Tech;Ph.D.,

PRINCIPAL

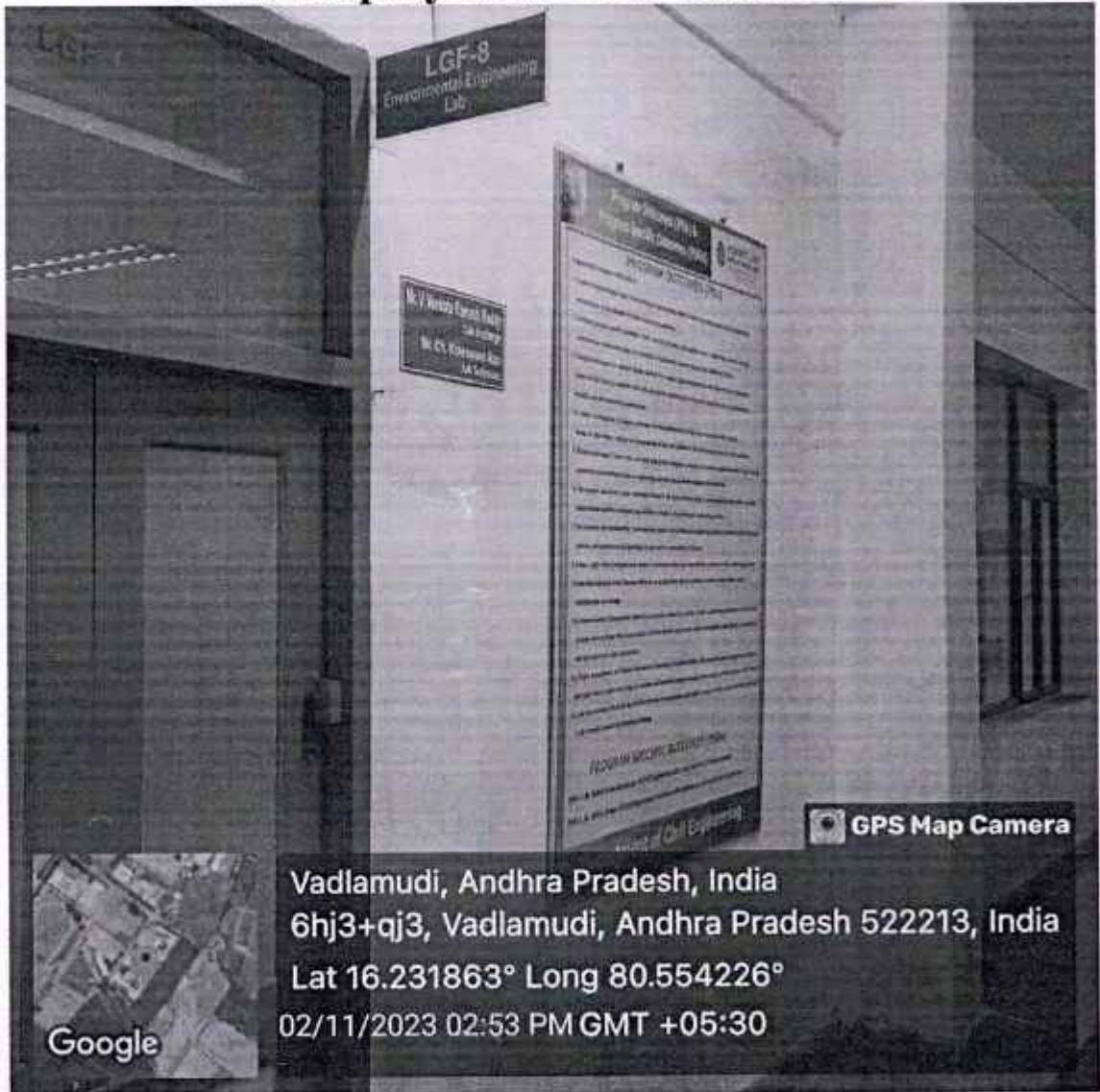
Vignan's Lara Institute of Technology & Science
VADLAMUDI-522 213, Guntur, A.P., India



VIGNAN'S LARA INSTITUTE OF TECHNOLOGY & SCIENCE (AUTONOMOUS)

Approved by AICTE New Delhi & Affiliated to JNTUK Kaknada
Accredited by NAAC 'A+' and NBA | ISO 9001 : 2015
Vadlamudi - 522 213, Guntur District

PO's Displayed at Laboratories




Dr. K. Phaneendra Kumar
M.Tech;Ph.D.,
PRINCIPAL
Vignan's Lara Institute of Technology & Science
VADLAMUDI-522 213, Guntur, A.P., India



VIGNAN'S LARA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinda
Accredited by NAAC 'A' and NBA | ISO 9001 : 2015
Vadlamudi - 522 213, Guntur District

PO's Displayed at Website

The screenshot shows a web browser window displaying the Vignan's Lara website. The URL is vignanlara.org/departments/cse/concourse.php. The page features a navigation menu with links for HOME, GOVERNANCE, ACADEMICS, DEPARTMENTS, STUDENT CORNER, PLACEMENTS, RESEARCH, and SUMMER. A sidebar on the left contains links for Events, Achievements, and Innovations by the Faculty in Teaching Learning. The main content area is titled "Programme Outcomes (POs)" and lists eight outcomes:

- PO1: Engineering knowledge:** Apply the knowledge of mathematics, sciences, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3: Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7: Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for, sustainable development.
- PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documents, make presentations, and give and receive clear instructions.

At the bottom of the page, there is a weather widget showing 90°F Partly sunny, a taskbar with various application icons, and a system tray showing the time as 12:58 PM on 5/21/2022. A signature and stamp are present over the bottom right of the page.

Dr. K. Phaneendra Kumar
M.Tech, Ph.D.
PRINCIPAL
Vignan's Lara Institute of Technology & Science
VADLAMUDI-522 213, Guntur, A.P., Ind.



CO's Displayed at Website in Syllabus Copy

The screenshot shows the website interface for Vignan's Lara Institute of Technology & Science. The main heading is "ELECTRONICS AND COMMUNICATIONS ENGINEERING". The navigation menu includes: HOME, GOVERNANCE, ACADEMICS, DEPARTMENTS, STUDENT CORNER, PLACEMENTS, RESEARCH, and ALUMNI. A sidebar on the left contains buttons for: Department Home, HOD's Message, PEOS, PSO'S AND PO'S, Faculty, Infrastructure, and Laboratory. The main content area is titled "R13 REGULATION" and shows the "I Year - I Semester" syllabus under the "Programme Structure" tab.

S. No.	Code	Subject	T	P	Credits
1	R13101	English - I	3	--	3
2	R13102	Mathematics - I	3+1	--	3
3	R13107	Mathematics - II (Mathematical Methods)	3+1	--	3
4	R13103	Engineering Physics	3+1	--	3
5	R13106	Professional Ethics and Human Values	3+1	--	3
6	R13109	Engineering Drawing	1+3	--	3
7	R13111	English - Communication Skills Lab -I	--	3	2

At the bottom of the screenshot, there is a system tray showing the date and time as 3/21/2022, 12:48 PM, and a green handwritten signature "KVK" over the system tray area.

Dr. K. Phaneendra Kumar
M.Tech;Ph.D.,

PRINCIPAL

Vignan's Lara Institute of Technology & Science
VADLAMUDI-522213, Guntur, A.P., Indi-



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA
KAKINADA-533003, Andhra Pradesh, India
 R-13 Syllabus for ECE, JNTUK

II Year-I Semester		L	T	P	C
			4	0	3
ELECTRONIC DEVICES AND CIRCUITS (RT21041)					

Prerequisite Course:

-Nil-

Course Description and Objectives:

- To learn and understand the basic concepts of semiconductor physics.
- Study the physical phenomena such as conduction, transport mechanism and electrical characteristics of different diodes.
- To learn and understand the application of diodes as rectifiers with their operation and characteristics with and without filters are discussed.
- Acquire knowledge about the principle of working and operation of Bipolar Junction Transistor and Field Effect Transistor and their characteristics.
- To learn and understand the purpose of transistor biasing and its significance.
- Small signal equivalent circuit analysis of BJT and FET transistor amplifiers and compares different configurations.

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

COs	Course Outcomes	POs
1	Understand the basic concepts of semiconductor physics.	3
2	Understand the formation of p-n junction and how it can be used as a p-n junction as diode in different modes of operation.	3
3	Know the construction, working principle of rectifiers with and without filters with relevant expressions and necessary comparisons.	3
4	Understand the construction, principle of operation of transistors, BJT and FET with their V-I characteristics in different configurations.	3
5	Know the need of transistor biasing, various biasing techniques for BJT and FET and stabilization concepts with necessary expressions.	3
6	Perform the analysis of small signal low frequency transistor amplifier circuits using BJT and FET in different configurations.	3

SYLLABUS

UNIT - I

Review of Semi Conductor Physics: Hall effect, continuity equation, law of junction, Fermi Dirac function, Fermi level in intrinsic and extrinsic Semiconductors

Dr. K. Phaneendra Kumar
 M.Tech; Ph.D.,
PRINCIPAL

Vignan Lara Institute of Technology & Science
VADLAMUDI-522 213, Guntur, A.P., India



CO's Displayed at Website in Syllabus Copy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA
 KAKINADA-533003, Andhra Pradesh, India
 B-19 Syllabus for CSE, JNTUK

L	T	P	C
3	0	0	3

PROGRAMMING FOR PROBLEM SOLVING USING C (ES1201)

Prerequisite Course:
 Basic Knowledge on Computers

Course Description and Objectives:
 Formulating algorithmic solutions to problems and implementing algorithms in C

Course Outcomes:
 Upon completion of the course, the student will be able to achieve the following outcomes.

COs	Course Outcomes	POs
1	Acquires skills to write, compile and debug programs in C language.	2,3
2	Be able to use different operators, data types and write programs that use two-way/ multi-way selection.	2,3,12
3	Acquire knowledge to select the best loop construct for a given problem.	1,2
4	Design and implements programs to analyze the different pointer applications	2,3
5	Design and implements C programs with functions, File I/O operations.	2,3

Syllabus:

mg

Dr. K. Phaneendra Kumar
 M.Tech; Ph.D.,
 PRINCIPAL
 Vignan's Lara Institute of Technology & Science
 VADLAMUDI-522 213, Guntur, A.P., India