



VEMU INSTITUTE OF TECHNOLOGY

P.Kothakota, Chittoor District -517112

FDP

on

**“VLSI Design using
Xilinx & Mentor
Graphics Tools”**

13-09-2021 to

18-09-2021

A one week Faculty
Development Program
on

"VLSI Design using Xilinx & Mentor Graphics Tools" From 13th -18th September 2021



Organized by
Dept. of E. C. E



VEMU INSTITUTE OF TECHNOLOGY

Approved by AICTE, Permanently affiliated to
JNTUA,

NAAC & NBA Accredited, ISO Certified
Institute & Recognized under 12(B) & 2(F)
UGC Act.

P. Kothakota, Tirupati - Chittoor Highway,
Chittoor District, Andhra Pradesh - 517112.

www.vemu.org

(As a part of MOU Activity)

In Association with



TechFluent Solutions Pvt Ltd

HYDERABAD-500068

+91-40-24228229

www.techfluent.in

CHIEF PATRON:

Prof. K. Chandra Sekhar Naidu,
Chairman, VEMU IT.

PATRON:

Dr. K. Naveen Kilari, Principal,
VEMU IT.

CONVENER:

Dr. S. Muni Rathnam, HOD-ECE,
VEMU IT.

COORDINATOR:

Mrs. R. Sindhu, Asst. Prof. in ECE,
VEMU IT.

ORGANIZING COMMITTEE:

- ❖ Dr. G. Elaiyaraja, Professor
- ❖ Dr. S. Muralimohan, Professor
- ❖ Dr. N. Sudhakar Reddy, Professor
- ❖ Mr. G. Sankarappa, Associate Professor
- ❖ Mr. N. Prakash Babu, Associate Professor
- ❖ Mrs. K. Jaya Sree, Associate Professor
- ❖ Mrs. R. Rani, Associate Professor
- ❖ Mr. Y. Mahesh, Associate Professor
- ❖ Mr. N. Kiran Kumar, Associate Professor
- ❖ Mr. P.H. Chandra Mouli, Associate Professor
- ❖ Mrs. A. Kusuma Kumari, Assistant Professor
- ❖ Mrs. P. Tejaswini, Assistant Professor
- ❖ Mrs. D. Reena, Assistant Professor
- ❖ Mrs. J.V. Pasha, Assistant Professor
- ❖ Mrs. M. Bhargavi, Assistant Professor
- ❖ Mrs. S. Chandana, Assistant Professor
- ❖ Mr. P. Vemaiah, Assistant Professor
- ❖ Mrs. P. Sirisha, Assistant Professor
- ❖ Ms. V. Bharathi, Assistant Professor
- ❖ Mrs. M. J. Chithraja, Assistant Professor
- ❖ Mr. K. Guraiah, Assistant Professor
- ❖ Mr. B. Praveen Kumar, Assistant Professor
- ❖ Mr. D. Mohan Reddy, Assistant Professor
- ❖ Mr. N. Gangadharam, Assistant Professor
- ❖ Mr. V. Umamaheswararao, Assistant Professor
- ❖ Mr. M. Tulasiram, Assistant Professor

Professor

- ❖ Mr. M. Arun Kumar, Assistant Professor
- ❖ Mr. G. Sivakoteswara Rao, Assistant Professor
- ❖ Mrs. R. Sindhu, Assistant Professor
- ❖ Mrs. B. Mounika, Assistant Professor

ABOUT VEMU IT:

VEMU Institute of Technology (VEMU IT) is one of the best and finest engineering college in Chittoor District, Andhra Pradesh. Beginning its quality inputs in 2008, it has attained ISO 2015:9001 certification for quality management within a short span of time. The institution's progress and contribution to the field of technical education for over one decade and accredited by NAAC in the year 2017. Recognized under 2(F) and 12(B) UGC Act, Permanent Affiliation with JNTUA (Anantapuramu) & accredited by NBA in the year 2021. It is located in P. Kothakota, near Pakala & Tirupati - Chittoor Highway in a beautiful 16-acre campus. A diverse, talented community united by a passion for learning and quest for more, VEMUIT challenges its students to make a difference on its campus, in the region, and in the companies where ever they join. With unmatched results in every sphere of education, its commitment to be the best has grown to transform its departments into Center of Excellence.

INDUSTRY SUPPORTED LABS:

With the support of the industry, Vemu Institute of Technology established the following laboratories in the college for the benefit of students to get trained in the emerging technologies.

- Dassault's 3D Experience Center
- AP CM's Skill Excellence Center
- YMTS Innovation Center
- Pavan Empower Solutions Lab
- Industrial IoT Lab
- Transformer Testing and manufacturing Lab

- Cloud Computing and Cyber Security Labs
- e-Yantra Robotics Lab

Features:

- MOUs with industries for internship, Training and projects viz. UI Path, RAVANDS, SNAM Alloys, CODE TANTRA, Young Minds Technology solutions, SR Unique solutions, Sigma Controls etc.
- MHRD – Institution's Innovation Council (IIC) has been established and actively functioning.
- Certification courses by foreign universities

Other features:

- Promotion of industry-institution interaction exchange programs.
- Regular seminars, workshops and guest lectures by eminent Professors from Universities and Industry
- Training for Placements right from 1st year
- Special focus on Communication skills, analytical skills and technical skills
- Entrepreneurship Development Cell to make the students entrepreneurs
- R & D cell to inculcate the quest of research in students
- In-Plant Training and Internship arrangement for students
- Counseling by senior faculty members.
- Management headed by a retired and accomplished Professor
- Cultural and sports forums to encourage extracurricular activities
- Classrooms are spacious and well-furnished and provided with Audio-Visual teaching aids and the laboratories are equipped beyond the curriculum requirements.

- Exposure for students to the recent trends in technology through innovative teaching learning methods.
- Merit Scholarships of 10,000 / 5,000 for all those merit students who secure more than 85% / 80% marks in every year.

ABOUT THE DEPARTMENT:

The department offers B. Tech. in Electronics & Communication Engineering, and M. Tech in VLSI Design and Embedded System. The department has highly qualified faculty members, state of art laboratories and infrastructure. Continuing Education programs and customized training / workshops are being organized by industry personnel on regular basis. Students of the department are actively involved in various Co-curricular & Extracurricular activities and extension activities as a part of student's association (ELITES) activities. Both ECE Students and Faculties are having memberships in IETE, ISTE, IEEE etc., The Department has a full-fledged departmental library.

INTRODUCTION AND OBJECTIVES:

VLSI Design is now a most-in-demand area for potential and career conscious engineers. The workshop aims to teach core concepts and impart hands on training of digital IC design and will enable the participants to understand and apply IC related issues of power and performance. It will equip them to implement IC design solutions on FPGAs and using state-of-the-art industrial EDA tools.

ABOUT TECHFLUENT:

TECHFLUENT is an ISO 9001:2015 certified company. It is a leading innovator in providing cutting edge solutions in Embedded Systems, RF, Data Logging and IoT based solutions. TechFLUENT product line includes a wide range of Data Loggers, Development Boards (IoT Enabled and FPGA Kits) and custom designed

prototyping systems as well as automated test equipment. They have customers in Defence, Aerospace, Industrial Automation, Psu's, Corporates and Academics. TechFLUENT with its industrial and academic reach out has been able to address critical professional engineering services to industries and corporates. TechFLUENT is deeply committed to developing solutions for industries as well as government agencies. TechFLUENT with its rich technical expertise can help organizations to find solutions for their unique challenges.

RESOURCE PERSONS:

V. Hruday Kumar, Senior Engineer
P. Rohith, Technical Engineer
S.Tharun, Application Engineer

Registration Link:

https://docs.google.com/forms/d/e/1FAIpQLSdaTrBwule-IQFVmOGkb19jGcvJO9OPT9BrByTi4jJb7IMpIA/viewform?usp=sf_link

GUIDELINES:

- ✓ No Participation fee will be collected
- ✓ Maximum no. of participants limited to 40 only
- ✓ 100% attendance is mandatory to issue Certificate.
- ✓ Participants will be selected on first come first serve and will be intimated through the e-mail only
- ✓ Participation certificate will be provided.

ACCOMMODATION:

- ✓ Free boarding and lodging will be provided for outstation participants.

FOR MORE DETAILS CONTACT:

Email ID: hodece@vemu.org

Phone Numbers:

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+91 9545360167



VEMU INSTITUTE OF TECHNOLOGY
P.KOTHAKOTA, TIRUPATHI-CHITTOOR ROAD, CHITTOOR, AP-517112

DEPARTMENT OF E.C.E

A One Week FDP on “VLSI Design using Xilinx & Mentor Graphics Tools”

On

13th to 18th September 2021

S.No	DATE	Time	Topics to be Covered	Resource Person
1	13/09/2021	10.00AM to 11AM	Inauguration	
		11.00AM to 1 PM	FPGA design flow using Vivado Hardware required – Basys3/Nexys4DDR a) 7-Series Architecture Overview b) Lab 1: Vivado Design Flow c) Lab 2: Synthesizing a RTL Design	Mr.V. Hruday Kumar
		1.50PM to 4 PM	d) Implementation and Static Timing Analysis e) Lab 3: Implementing the Design	Mr.V. Hruday Kumar
2	14/09/2021	10.00AM to 1PM	a) Hardware required – Basys3/Nexys4DDR IP Integrator b) Lab 4: Using the IP Catalog and IP Integrator Xilinx Design Constraints	Mr.V. Hruday Kumar
		1.50PM to 4 PM	a) Lab 5: Xilinx Design Constraints Hardware Debugging	Mr.V. Hruday Kumar
3	15/09/2021	10.00AM to 1PM	a) Introduction to Embedded System Design using Zynq b) Create a Vivado project and use IP Integrator to develop a basic embedded system for a target board.	Mr.P. Rohith



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		1.50PM to 4 PM	a) Zynq Architecture b) Extending the Embedded System into Programmable Logic c) Adding Peripherals in Programmable Logic	Mr.P. Rohith
4	16/09/2021	10.00AM to 1PM	a) Introduction to IC/ASIC Design Flow and Mentor EDA Tools.	Mr.P. Rohith
		1.50PM to 4 PM	a) Detailed Semi-Custom IC Design Flow. b) Hands-On Lab Sessions.	Mr.P. Rohith
5	17/09/2021	10.00AM to 1PM	a) Detailed Semi-Custom IC Design Flow (Contd)	Mr.S.Tharun
		1.50PM to 4 PM	a) Hands-On Lab Sessions. b) Detailed Full-Custom IC Design Flow.	Mr.S.Tharun
6	18/09/2021	1.50PM to 4 PM	c) Hands-On Lab Sessions	Mr.S.Tharun
		1PM to 3PM	Valedictory	


Co-Ordinator


HEAD
Converter
DEPARTMENT OF ECE
VEMU INSTITUTE OF TECHNOLOGY
P. KOTHAKOTA - 517 112

16	Mrs. D.Reena	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry
17	Ms. J.V.Pesha	Jy	Jy	Jy	Jy	Jy	Jy	Jy	Jy	Jy	Jy	Jy	Jy
18	Mrs. M.Bhargavi	By	By	By	By	By	By	By	By	By	By	By	By
19	Mrs. S.Chandana	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca
20	Mr. P.Vemaiah	Vy	Vy	Vy	Vy	Vy	Vy	Vy	Vy	Vy	Vy	Vy	Vy
21	Mrs. P.Sirisha	Sy	Sy	Sy	Sy	Sy	Sy	Sy	Sy	Sy	Sy	Sy	Sy
22	Ms. V.Bharathi	Zy	Zy	Zy	Zy	Zy	Zy	Zy	Zy	Zy	Zy	Zy	Zy
23	Mrs. M.J.Chithraja	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch
24	Mr. K.Guraiah	Gy	Gy	Gy	Gy	Gy	Gy	Gy	Gy	Gy	Gy	Gy	Gy
25	Mr. B.Praveen Kumar	Py	Py	Py	Py	Py	Py	Py	Py	Py	Py	Py	Py
26	Mr. D.Mohan Reddy	My	My	My	My	My	My	My	My	My	My	My	My
27	Mr. N.Gangadharam	Ny	Ny	Ny	Ny	Ny	Ny	Ny	Ny	Ny	Ny	Ny	Ny
28	Mr. V.Umamaheshwar Rao	Uy	Uy	Uy	Uy	Uy	Uy	Uy	Uy	Uy	Uy	Uy	Uy
29	Mr.M.Tulasi Ram	Ty	Ty	Ty	Ty	Ty	Ty	Ty	Ty	Ty	Ty	Ty	Ty
30	Mr.M.Arun Kumar	Ay	Ay	Ay	Ay	Ay	Ay	Ay	Ay	Ay	Ay	Ay	Ay

Sandhya
CO-ORDINATOR

Shree
CONVENER
DEPARTMENT OF ECE
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P. KOTHAKOTA - 507 112



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NEAR PAKALA, CHITTOOR-517112

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Report-on

Faculty development Program

on

“VLSI Design using Xilinx & Mentor Graphics Tools (MOU Activity)”

A one-week Faculty Development Program on “VLSI Design using Xilinx & Mentor Graphics Tools” was conducted by department of ECE by inviting Sri.V. Hruday Kumar, Product Engineer-Techfluent Solutions Pvt.Ltd, Hyderabad. The main objective of this FDP is to provide hands on experience with Mentor Graphics Tools.

The programme was inaugurated by ECE Dept, VEMU IT .The FDP Programme was started with Dr. S. Munirathnam, HOD of ECE, had welcomed Resource person Sri. V. Hruday Kumar, Product Engineer-Techfluent Solutions Pvt.Ltd, Hyderabad , Principal Dr. Naveen Kilari and Vice Principal Dr.D.Chandra sekhar. He had given introduction of all Dignitaries of the programme and invited guest. Dr. Naveen Kilari, Principal shared his views about the program. He informed that these kinds of FDP Programmes improves the knowledge in teaching. He congratulated the Department for organizing such a program through online.

After inauguration Resource person Sri. V. Hruday Kumar started his session by introduction to VLSI Design using Xilinx & Mentor Graphics Tools, 7-Series Architecture Overview, Synthesizing a RTL Design, Implementation and Static Timing Analysis and Implementing the Design.

Day-2 Resource person discussed about Hardware required – Basys3/Nexys4DDR IP Integrator & Using the IP Catalog and IP Integrator Xilinx Design Constraints for FPGA Design Flow, Xilinx Design Constraints Hardware Debugging.

Day-3 session was started by the resource person Mr. P. Rohith, Technical Engineer deliver the speech on Introduction to Embedded System Design using Zynq and explained how to Create a Viva do project and how to develop a basic embedded system for a target board using IP Integrator. The resource person extends his speech by explaining Zynq Architecture, Extending the Embedded System into Programmable Logic and Adding Peripherals in Programmable Logic.

Day-4 Mr. P. Rohith continued his speech by Introduction to IC/ASIC Design Flow and Mentor EDA Tools Detailed along with Semi-Custom IC Design Flow. He had given some Lab Sessions Hands-On to the faculties for future reference.

Day-5 Mr.S.Tharun, application Engineer, discussed about Detailed Full-Custom IC Design Flow. He provided some hand- on.

Day-6 Mr.S.Tharun recalls the previous session and provided hand- on for better practice.

In this FDP Program the faculty members participated actively by asking doubts and the resource persons also clarified their doubts patiently.

Finally the FDP was ended by Valedictory. The resource person concluded the program by enhancing the knowledge on VLSI Design using Xilinx & Mentor Graphics Tools. The total program successfully completed with the cooperation of Principal, HOD, and all the faculty members of the department.



Head
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Department of Electronics and Communication

★ Certificate of Participation ★

This is to certify that

Mrs. S. CHANDANA

of

VEMU IT

has actively participated in One Week Faculty Development Program on “VLSI Design using Xilinx & Mentor Graphics Tools” Organized by the Department of Electronics and Communication Engineering, VEMU Institute of Technology, P.Kothakota, In Association with Techfluent Solutions Pvt. Ltd., Hyderabad, from 13th to 18th September 2021.

Sindhu
Co-Ordinator
Mrs.R. Sindhu

Munirathnam
PRINCIPAL
VEMU INSTITUTE OF TECHNOLOGY
P. KOTHAKOTA - 517 112
Dr.S.Munirathnam

Principal
Dr.Naveen Kilari



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Department of Electronics and Communication

☆ Certificate of Participation ☆

This is to certify that

Mrs. A. KUSUMA KUMARI

of

VEMU IT

has actively participated in One Week Faculty Development Program on “VLSI Design using Xilinx & Mentor Graphics Tools” Organized by the Department of Electronics and Communication Engineering, VEMU Institute of Technology, P.Kothakota, In Association with Techfluent Solutions Pvt. Ltd., Hyderabad, from 13th to 18th September 2021.

Sindhu
Co-Ordinator
Mrs.R. Sindhu

M
PRINCIPAL
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S. Munirathnam
MOD-EECE
Dr.S.Munirathnam

Principal
Dr.Naveen Kilari