

List of Short Term Courses during 2017-18

S No	Department	Course Coordinator	Title of Short Term Course	Duration
1	Civil Engineering	Prof. K K Pathak	APRRAVSCE - 2017	May 29 - June 9, 2017
2	Chemical Engineering & Tech.	Prof. M K Mondal	Recent Advances in Wastewater Treatment	June 26-30, 2017
3	Bio-Chemical Engineering	Prof. Pradeep Srivastava	Advances in Bioprocess Engineering	June 19-25, 2017
4	Mathematical Sciences	Prof. S K Upadhyay	Algebra, Analysis & Application	July 03-09, 2017
5	Electrical Engineering	Prof. M K Verma	Power System Stability & Control in Smart Grid Architecture	July 03-08, 2017
6	Mechanical Engineering	Prof. A K Agarwal	Total Quality Management	July 10-15, 2017
7	Mathematical Sciences	Prof. T Som	Fixed Point Theory & Dynamical Systems	June 19 - July 01, 2017
8	Mining engineering	Prof S P Gupta	Advance Techniques of Project Management	July 10-15, 2017
9	Electronics Engineering	Prof. S Jit	Modelling & Simulation of Adv. Semiconductor Devices	July 17-22, 2017
10	Mining engineering	Prof. Arif Jamal	Coal Quality Management & Utilization	July 24-29, 2017
11	Electronics Engineering	Prof. Kishor P Sarawadekar	HDL for Signal, Image & Video Processing	August 21-26, 2017
12	Metallurgical Engineering	Dr. Jay-surya Basu	AMMDISMM - 2017	Sept. 11-16, 2017
13	Computer Science & Engg.	Prof. K K Shukla	Machine Learning, Trends, Perspective & Prospects	Sept. 18 - 25, 2017
14	Mechanical Engineering	Prof. S K Sharma	Engineering Economics	Sept. 18-23, 2017
15	Chemical Engineering & Tech.	Prof. P K Mishra	Recent Advances in Bio-Energy	October 02-06, 2017
16	Bio-Chemical Engineering	Prof. S Kundu	Bioprocess Instrumentation & Control in Bioreactor Design	Nov. 07-13, 2017
17	Chemistry	Prof. Y C Sharma	Advanced Treatment Processes for Industrial Effluents	Feb. 09-14, 2018
18	Material Sciences	Dr. A K Singh	Materials Characterization for Engineers	Feb. 05-10, 2018

How to reach?

The city of Varanasi is well connected by road, rail and air with all the important places of India. Regular flights are there from Varanasi to Delhi, Mumbai, Chennai, Bangalore, Kolkata, Khajuraho and Lucknow. The Institute is located in the extreme south of the Varanasi city and about 7 km away from Varanasi Railway Station and 30 km from the Babatpur (Varanasi) airport. Taxis and auto-rickshaws are available for local transport.

About the Department:



Department of Electronics Engineering came into existence as an offshoot of Electrical Engineering Department in the year 1971 (when Banaras Engineering College, College of Mining and Metallurgy and College of Technology had been amalgamated to form the Institute of Technology in its present form). The intake every year of the Department is 79 in the B. Tech. level and 47 in the M. Tech. level. Besides teaching students of our own discipline (Electronics Engineering), we also offer the basic courses in Electronics Engineering to almost all the Departments of the Institute, we also teach advanced-level courses to the students of Electrical Engineering and Computer Engineering Departments.

Our current priority areas of specialization are (i) Communication Systems Engineering (ii) Digital Techniques & Instrumentation (iii) Microwave Engineering and (iv) Microelectronics. We are also running a doctoral program in these thrust areas. A mention may be made about the external Ph.D. Registration Scheme of the Institute under which at a time there would be on an average 4-5 Scientists of National Laboratories registered for their Ph.D. degree.

<http://www.iitbhu.ac.in/ece/>



Short Term Continued Education Program

on

HDL for Signal, Image and Video Processing (HSIVP) August 21-26, 2017

Organized by

Department of Electronics Engineering
Indian Institute of Technology (BHU)
Varanasi - 221005



Quality Improvement Program Center
Indian Institute of Technology (BHU)
Varanasi - 221005, (U.P.)

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IIT (BHU), Varanasi-221005

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About the Course:

In this digital era, signal, image and video processing is very promising multidisciplinary research domain. Majority of the work is performed using MATLAB, C, C++, OpenCV etc. While designing dedicated hardware for such algorithms, their modeling in Hardware Description Languages (HDLs) is imperative and emphasis is given to other requirements like die area of the integrated circuit, maximum speed of operation and power consumption. HDLs play vital role while translating such algorithms. Therefore, the main objective of this short term course is to introduce HDLs, their usage to meet the aforementioned requirements, and thinking in terms of hardware perspective. Other topics like concurrency modeling, event driven simulation, design optimization, translation, synthesize and mapping hardware on to a given technology will also be covered. Without proper knowledge of these paradigms, realizing high performance VLSI architectures for signal, image and video processing applications is a challenging task. Exciting laboratory experiments are also planned to provide hands on experience to all the participants.

Course Contents:

The tentative list of topics to be covered in this course is:

- Algorithms in signal, image and video processing
- Hardware perspective e.g. design optimization, resource sharing, parallel-pipelining etc.
- Thinking in terms of HDL.
- HDL basics, concurrency modeling and coding in HDL
- FPGA basics, ZynQ architecture, AXI bus protocol.
- Implementing algorithms on FPGA boards like Basys 3, Nexsys 4, Zybo, Spartan 3E.

Who Can Attend?

Research scholars, M. Tech. final year students, professional engineers working in the domain of signal, image and video processing are targeted for this short duration course.

How to Apply?

Scanned copy of the filled in application form duly endorsed by the forwarding authority along with a **demand draft** for ₹ 5000/- drawn on any nationalized bank in favour of “**Registrar, IIT (BHU), Varanasi**” as a non-refundable course fees to confirm of the participation. The course fees include the study material, tea, snacks, lodging and boarding charges. Selected candidates may be provided shared accommodations either in the guest house or any of the hostels. Please send your duly filled in application form and demand draft to the course coordinator. You may mail the scanned copy of your documents at hsivp.iitbhu@gmail.com and cc to the Coordinator of QIP coordinator.qip@iitbhu.ac.in before July 30, 2017 to confirm your seat.

Important Note: Please, bring your laptop (preferably 64 bit OS) so that you can perform laboratory experiments independently. If possible, install [Vivado 2016.2: Lab Edition](#) available at <https://www.xilinx.com/support/download/>

Participation Certificate

Certificate of participation will be issued to all the participants only after successful completion of the course.

Important Dates:

Last Date of Registration: July 30, 2017

Intimation of Selection: August 02, 2017

Course Dates: August 21-26, 2017

www.iitbhu.ac.in

Short Term Continued Education Program on “**HDL for Signal, Image and Video Processing (HSIVP)**”,

August 21 - 26, 2017

REGISTRATION FORM

1. **Name (block letter):**
2. **Designation & pay scale:**
3. **Organization:**
4. **Address for communication:**
.....
.....
Pin code:
- Ph. No.:** **Fax No.:**
- E-mail:**
5. **Highest Academic Qualification:**
6. **Specialization:**
7. **Experience (in years):**
(a) Teaching:
- (b) Industrial:**

Please register me for the course on “**HDL for Signal, Image and Video Processing (HSIVP)**” to be held at IIT (BHU) Varanasi.

Place:

Date:

Signature of the applicant

CERTIFICATE

Prof./Dr./Mr./Ms./Mrs. _____ is an employee/bonafide student of our organization/institute. The applicant will be permitted to attend the short-term course “**HDL for Signal, Image and Video Processing (HSIVP)**” at IIT (BHU) Varanasi during date of CEP, if selected.

Date: Signature of Sponsoring Authority

Designation:

Official Seal:

DD No. : Date:

Bank:

Amount: ₹ 5000.00

Signature of the Applicant