



# RISC-V VLSI Implementation Flow- RTL2GDS

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### Preamble (Electronics & ICT Academy)

Government of India had announced a National Policy on Skill Development, which has set a target of skilling 500 million people by 2022 in the domain of Electronics & IT. Under the plan scheme of "Digital India Manpower Development". MeitY has set up seven (07) Electronics and ICT Academies as a unit in 03 IITs, 03 NITs and 01 IIIT with an objective of faculty/mentor development/up gradation in the areas related to Electronics & ICT leading ultimately to improved employability of graduates/diploma holders. MNIT Jaipur has set up such an academy for providing specialized training to faculty and industry persons in the states/UTs of Rajasthan, Gujarat, Daman & Diu, Dadra Nagar Haveli.

### (A) Issues-

1. IT Hardware and Electronics Manufacturing industry- availability of properly trained, skilled and qualified manpower
2. Number of quality PhDs generated in IT / Computer Science is very low
3. In E & ICT domain- there is a very high degree of obsolescence of existing technologies and faster emergence of newer technologies

### (B) Approach-

1. A focused faculty training/updation programme for IT, Electronics and related sectors
2. Spreading up and continuous updation regarding Emerging Technology
3. Training and consultancy services for Industry
4. Design, Develop and Deliver specialized modules for specific research areas and Industry
5. Providing advice and support for technical incubation and entrepreneurial activities

An intensive two-week online certification programme is being organized jointly by IIT Guwahati, NIT Patna, and MNIT Jaipur for the faculty of engineering and technological institutions, working professionals and research oriented students of Indian organizations. It is also open to persons from outside India in academia, industry. This workshop will cover fundamentals of RISC processor, SoC design issues and implementation from RTL to GDS using open source tools. Eminent experts from IIT/NIT/Industry and prestigious foreign universities would be conducting online lab and training sessions.

### Experts/Speakers-

Experts- (i) Prof. V. Kamakoti, IITM (consent awaited);	(ii) Prof. M. Balakrishnan, IIT Delhi
(iii) Prof. Anshul Kumar, IIT Delhi,	(iv) Prof. Preeti Ranjan Panda, Head, School o IT, IIT Delhi;
(v) Industry- Mr. Gaurav Jalan, Founder SpicaWorks, Bengaluru	(vi) Other persons from Industry

### Programme Modules:

- Simulations and Characterization for Libraries
- Design Basics: Circuit, Architecture and System Level
- Constraints and Synthesis : Input Output Constraints, Complex SoC Constraints;  
Input Output Files : Lib Files, General files needed in complete flow
- Layer and Power Planning
- Floorplanning
- Delay Calculations and System Implications
- Setup and Hold Discussion; Placement Basics and Settings
- DRC LVS and Extraction
- Low Power Flow Basics
- Sign Off

### Programme Coordinator:

Prof. D. Boolchandani	<a href="mailto:dboolchandani.ece@mnit.ac.in">dboolchandani.ece@mnit.ac.in</a>	9549654229 (M)
Dr. Deepak Bharti	<a href="mailto:dbharti.ece@mnit.ac.in">dbharti.ece@mnit.ac.in</a>	9530203200 (M)

### Certification:

Certificate fee of

- (i) Rs. 500 (faculty/students from India/SAARC/African countries)
- (ii) Rs. 1000/- (others)
- (iii) USD 60 (other countries)

is applicable.

### Registration:

Registration is open to faculty, industry persons, doctoral, postgraduate and graduate students working in electrical & Computer Engineering and related fields.

Participants will be admitted on first-come first-served basis.

**Register online at -** <http://online.mnit.ac.in/eict/>

- (A) Fee once paid will not be refunded back; it would be adjusted in future.
- (B) The fee covers online participation in the programme, tutorial notes and examination, certification charges.
- (C) The organizers should receive the registration amount through online payment gateway provided at the registration portal.
- (D) For schedule details, see website.

→ For any other query, email us at [academy@mnit.ac.in](mailto:academy@mnit.ac.in)

For details of other programmes, visit -

[http://www.mnit.ac.in/eict/acad\\_training\\_prg.php](http://www.mnit.ac.in/eict/acad_training_prg.php)