

*The best-in-class VLSI Design Engineering Finishing School*



# Give your engineering degree the RV-VLSI advantage!

Explore rewarding career opportunities with global  
leaders in VLSI and Embedded Technologies

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## What makes RV-VLSI the best choice?

### ■ RV-VLSI is a unique concept in VLSI Design Engineering with:

- A combination of design and research centre and the VLSI finishing school to make budding engineers industry-ready
- Faculty with rich industry experience to train engineers to be productive in the industry
- Industry proven courseware and concept labs to enhance the learning experience

### ■ Infrastructure and state-of-the-art facility

#### “ABHYAS” the nation’s first VLSI Engineering practice center

- Perfect the art of VLSI design engineering at our one-of- its-kind practice center under the guidance of experts from the industry
- Work on complex design problems as part of the courseware at RV-VLSI, using high-end Linux-based SUN Thin Client environment with software licences from: Cadence, Mentor Graphics and Synopsys. Part of the infrastructure includes elaborate setup of advanced scripts and foundation IPs in the form of standard cells, IOs, memory compilers and design kits from various foundries from 180nm to 45nm.
- At “ABHYAS” one gets an opportunity to feel the industry work-environment even before setting foot into it.
- Every student interacts with the faculty and colleagues through email - thus developing written communication skills, so crucial to work in the industry

### ■ Courseware and unique methodology of teaching

- The courseware has been designed by professionals from the VLSI industry with decades of experience in designing VLSI chips and is application-oriented. It complements academic undergrad and post grad learning
- The teaching methodology comprises 25% theory and 75% labs with live project experience in an industry-like environment
- The courseware and training methodology focuses on making students productive in the industry. Courseware and labs are revised for every batch to reflect the latest technological trends.
- Courseware includes soft skills training to familiarize students with industry culture.

### ■ Faculty with a difference

A big differentiator of training at RV-VLSI is that the CEO and the faculty are from the U.S.; with rich industry experience and a passion, to guide and motivate young aspiring engineers to realize their VLSI career goals and dreams.

## Who can be a VLSI Engineer?

- VLSI Design engineering is a specialization dedicated to the design and fabrication of high-end nanometer chipsets like, microprocessors, chips for mobile applications, audio and video applications etc.
- The prerequisite to be a VLSI Engineer is a BE in Electronics or related branch of engineering and a specialization in VLSI.
- For a VLSI Engineer many career avenues open up in Analog, Digital, Mixed Signal and discrete Design with implementation flows ranging from ASIC to FPGA methodologies.



## Programme offerings

### Advanced Diploma in ASIC Design

This program offers VLSI training for careers in ASIC and FPGA Design. The course builds from core concepts to advanced levels with a good balance of lectures and lab, followed by a live industry relevant project.

- A compact 6 months program comprising eight modules of duration 1 to 2 weeks each, with built-in concept labs, mini projects, projects design review and documentation
- Three phases:

#### Concepts phase

- Advanced Logic Design & Verilog for VLSI engineers

#### Specialization phase

- RTL Verification, Synthesis, Static Timing Analysis and Physical Design

#### Experience phase

- Live project

### IC Mask Layout design

This program offers IC Layout engineering training enabling students to master and gain technical expertise in this specialized area. The course covers all aspects of IC Layout engineering, starting from electrical concepts to advanced topics in deep sub micron, as appropriate for layout design.

- Duration two months
- Three phases

#### Concepts phase (2 modules)

- Linux, Vi and Perl, Nanometer Design Concepts

#### Specialization phase (2 modules)

- PDK's, IC fabrication process, ESD, LUP, DFM, device matching, physical verification and parasitic extraction

#### Experience phase

- Live project

### Advanced Diploma in Embedded Systems (ADEMS)

This program is delivered through a special training alliance between TATA ELXSI Pvt. Ltd. and the RV-VLSI faculty. Through this arrangement working professionals from TEL and RV-VLSI deliver the course on a full-time basis. This program is designed to make one an Embedded Systems Design engineer, with a greater bias towards software.

The course includes the following topics:

**Module 1:**  
Designing Microcontroller based systems

**Module 2:**  
RTOS

**Module 3:**  
C Programming

**Module 4:**  
System Software & Tool Chain

**Module 5:**  
Embedded OS

**Module 6:**  
Device Drivers

**Module 7:**  
Project Work

Total duration of the course is 400 hours out of which 200 hours are allocated for the elective module. The elective module will consist of industry relevant project work and associated specialized theory.

## Short Module Programme (SMP)

Short refresher courses in VLSI design are offered to working professionals and change of track IT professionals through our short module programs. The duration of the module varies from one to two weeks depending on the module.

**Module 1:**  
**Logic design for VLSI Engineers**

**Module 2:**  
**Digital design using Verilog**

**Module 3:**  
**Design verification using System Verilog**

**Module 4:**  
**Digital design for Synthesis**

**Module 5:**  
**Fundamentals of timing closure for VLSI designs**

**Module 6:**  
**Physical design and verification for Nanometer technologies**

## Corporate Training

RV-VLSI offers customized courseware and training programmes to companies for their fresh hires, as well as specialized training for experienced professionals and is geared to handle training needs of 8 to 96 students at a time.

## VLSI Boot Camps for IV-VII semesters' students

- RV-VLSI has introduced a unique concept of Boot Camps to engage with engineering students at the grass-root level from 4th to 7th semesters
- The concept of Boot Camp is to make students industry ready by the time they obtain their Bachelor's degree.
- Boot camps focus on practical aspects of the VLSI courses covered from 4th -7th semesters in line with the university syllabus.
- Students attending all the Boot Camps and completing their BE project at RV-VLSI will be awarded a Diploma in VLSI Design to be jointly certified by RV-VLSI and the participating institution. Placement assistance to such colleges will be provided.

**Logic Design for VLSI Engineers – 4th semester onwards**

**CAD For VLSI Engineers – 5th semester onwards**

**Verilog for VLSI Engineers – 5th semester onwards**

**PERL for VLSI Engineers – 5th semester onwards**

**Making of Nanometer VLSI chips – 6th semester onwards**

**RTL to GDS design flow for VLSI Engineers – 6th semester onwards**

**Analog design techniques for VLSI Engineers – 7th semester onwards**

### What is unique about the faculty?

- The founder CEO and his team come from the industry and are involved with RV-VLSI full time.
- They have a collective experience of more than 150 tape-outs.
- All senior faculty have rich industry experience from both US and India
- RV-VLSI has an able team of “Certified Trainers” - with hands-on industry experience ranging from 7 to 19 years - in leading VLSI companies in the U.S.
- Each one of them is a veritable store-house of knowledge in VLSI design with good problem solving and mentoring skills
- Students get the benefit of their rich knowledge and experience and learn the secrets of VLSI chip design.

### RV-VLSI has earned the trust of VLSI companies

- RV-VLSI has earned the trust of several multinational companies who regularly offer placement opportunities to our candidates.
- Companies see value in recruiting RV-VLSI candidates - who are trained to be productive and employable within a very short time - offering a cost effective solution to their hiring needs.

### Selection Criteria (As per Industry Norms)

- Trainability and employability
- Written Test - Technical
- Online Aptitude Test
- One-on-one interview and Counseling

## What is the RV-VLSI placement programme?

RV-VLSI offers a comprehensive placement assistance to candidates undergoing courses in Advanced Diploma in ASIC design, IC Mask layout and Advanced Diploma in Embedded Systems, all along the course duration. With emphasis on:

- important concepts and their application in industry to help boost student's confidence while facing interviews.
- In-house quizzes, tests, labs and projects specially designed to recreate an interview setting to help students glide through potentially tricky questions
- Soft skills program to hone presentation and communication skills to enable working cohesively in teams during projects.
- Expert guidance to students to prepare resumes - that stand out and attract the right employer for the right job description.
- Mock-interview sessions to boost student's confidence to face real interviews.
- Placements - RV-VLSI has a good track record in placements.  
75-80% of our candidates have been placed in reputed multinational companies.



**Dr. M K Panduranga Setty**  
President, RSST

## RSST - A guiding force in high quality education

The Rashtriya Sikshana Samithi Trust (RSST) was founded in 1940 with the mission to 'Impart Quality Education to all sections of the society.' Sri M.C. Shivananda Sarma, an educationist and Sri Meda Kasturi Ranga Setty, a business man and philanthropist, came together to take this movement forward. Today six decades later, RSST, through the Rashtriya Vidyalyaya (RV) institutions, is in the forefront among providers of quality education in Karnataka with an alumnus comprising a galaxy of intellectuals, engineers, administrators, public servants, entrepreneurs, doctors, professionals, sportsmen, scientists, teachers and researchers.

Today the brand 'RV' immediately brings to mind a class of young global achievers in enterprise, information technology, industry and research. RV Institutions have been guiding thousands of young minds right from pre-school to high school, graduation and further into post graduation studies covering business, management, engineering, medicine and other professional disciplines.

Global recognition of RSST's initiatives has given it the impetus to modernize itself, expand the existing and explore new frontiers of knowledge for the betterment of society. In the process, RSST has been continuously evolving itself and strengthening its roots with the introduction of every new branch.

In it's pursuit of bringing in new and advanced disciplines, the RSST with Mr. Venkatesh Prasad, founded the RV-VLSI Design Center on October 2, 2006 to offer post-graduate studies in VLSI and embedded technologies.



### Mr. Venkatesh Prasad

Founder - CEO, RV-VLSI

Mr. Venkatesh Prasad is a VLSI professional with 19 years experience in the VLSI industry.

He graduated from RVCE and started his career in BEL, India - in bipolar design.

Thereafter he went to the US and worked in companies like :- Mentor Graphics, Synopsys, AMCC, and Conexant. He has an experience of more than 50 tape-outs. Coming from the industry he understands the needs of the industry; and with his interactions and associations with academic institutions he understands the lacuna that presently exists in the education system. His vision is to position RV-VLSI as the bridge and interface between the academia and the industry and rectify this lacuna.

Motivated by his passion for teaching VLSI and a genuine desire to set up an Industry standard **VLSI Training facility** - for the benefit of students aspiring for careers in the VLSI industry - Venkatesh Prasad gave up a lucrative career in the VLSI industry in the US, culminating in the genesis of **RV-VLSI Center of Excellence** in chip design

## Testimonials

*"At RV-VLSI, I got ample exposure to VLSI technology, though I have an industry experience of 7 years. The content of the ADAD program is exciting and helped to fill the black boxes I had about the ASIC flow. Learning VLSI was fun with the knowledgeable and friendly staff. Today I work with Intel".*

– **Hema Mehra**, Physical Design Engineer - INTEL

*"I have completed my ADAD from RV-VLSI and have been selected by INTEL. But for the training in RV-VLSI, I would not have made it to INTEL. The training filled the gap between my academic B.E degree and expectation of the industry in respect of technical and soft skills".*

– **Vineet Anand**, Physical Design Engineer - INTEL

*"As a student I did not know what attributes to look for in a training institute before joining. After I joined RV- VLSI, I understood the importance of good infrastructure, access to EDA tools and expert faculty in VLSI training, and also how crucial these parameters are for transforming an engineer into a productive professional".*

– **Sandesh Sanbhag**, RMI Course ADAD

*"The industry-like setting, with expert faculty has been a truly enriching experience. The training lays greater emphasis on concepts and practical skills. Its been a great learning experience on the whole. I think RV has provided me a firm foundation for a successful career in VLSI."*

– **Sarvotham Shetty**, Netlogic Course ADAD

*"The teaching methodology followed by the faculty here is very effective. The course is designed to bridge the gap between academia and industry and to make one productive very quickly. With coaching from Industry experts, exposure to all kinds of tools, virtual industry environment makes RV-VLSI a class apart. I have been successfully placed in Cypress Semiconductors as CAD engineer. RV-VLSI is more of a learning and design center than a training institute."*

– **Jayanth BS**, Cypress Course ADAD

*"I joined the embedded systems course at RV-VLSI because I know that the embedded industry is here to stay. The course is unique and covers the latest industry trends, besides providing insights into the working of companies in the embedded systems domain. I have gained much from the course".*

– **Siddharth Kumar**, Tata Elxsi Ltd.

*"I always wanted to do a PG course in embedded systems. I came to know about the Advanced Diploma in Embedded systems offered by RV-VLSI and was inspired by the course details. I have learned a lot from this course and we got hands-on practical training. I feel very happy that I am one of the fortunate persons to do the embedded course which has helped me get a job".*

– **Deepak M.N.**, Tata Elxsi Ltd.

*"I found the first Boot camp to be very interesting. The information content was very good. Now I can relate to fundamental concepts when dealing with circuits. I can distinguish between FPGA, ASIC & DIGITAL ANALOG VLSI; know the importance of subjects like logic design, Verilog and more so - how to choose a career. I'm looking forward to attend the next boot camp on logic design".*

– **Jagdish. S. Jagga**, BNMIT -6th Sem

*"I feel your idea of a boot camp was an amazing and an extremely useful creation. I personally feel I have gained a lot of information in the field of VLSI. This initiative by RV-VLSI has helped us know what is required - to bridge the gap between our knowledge and industry requirements".*

– **Prakash. C**, BNMIT -6th Sem

Placement programs with leading companies

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