Chief Patron

Dr. S.C. Vats, Chairman, VIPS-TC

Patron

Mr. Vineet Vats, Vice-Chairman, VIPS-TC

Convener of FDP

Prof. (Dr.) Deepali Virmani
Head of Department, VSE&T

Co-convener of FDP

Dr. Nisha Chugh, VSE&T

Organizing Committee

Dr. Anand Kumar Singh
Ms. Bhawna Rawat

About VIPS-TC

It was in the year 1997, that Dr. S.C. Vats, founder of Vivekananda Institute of Professional Studies-Technical Campus (VIPS-TC), met Swami Jitatmananda Ji, an eminent educationist, management expert, author of books on Modern Physics & Vedanta and Indian Ethos in Management, an active social worker and the editor of Prabudh Bharat (Awakened India), a journal started by Swami Vivekananda.

As the destiny ordained under a silver oak tree at 'Advait Ashram' in Mayawati in Pithoragrah District of Uttaranchal, vibrating thoughts were flowing from Swamiji's lips in the balmy aroma of the dense pine and fir forest and he almost gave a diktat to Dr. Vats to set up an Institute, for higher learning in the capital city of India, in the name of Swami Vivekananda, a prophet and a path finder.

It was a gigantic task that fell upon Dr. Vats' shoulders. But resolved as he was,he returned to Delhi and in a couple of months' time sold his ancestral house and from the sales proceed of that house seed capital was created, which was so very important for establishing a new Institute with high ideals.

In order to materialize Swamiji's dreams, Dr. Vats rolled out a road map. As a first step, he held brain storming session with eminent scholars and people from academia along with some legal luminaries and retired civil servants.

The brain child of which was a society for Total Revival of Nation, thus called the Society for Total Revival and National Glory and True Heritage (STRENGTH), which was later registered as a charitable society under the Registration of Societies Act, in 1998 with a mission of making VIPS an ideal educational Institution with the clear objective of "Man Making, Character Building, Nation Building" as envisaged by Swami Vivekananda.

VIPS
योगः कर्मसु कौशलम्
IN PURSUIT OF PERFECTION

AICTE

ATAL

ONE WEEK FACULTY DEVELOPMENT PROGRAMME

On

"Semiconductor Fusion Nexus: Integrating Academic Insights and Industry Innovations"

Under

AICTE Training & Learning (ATAL) Academy

Sponsored by AICTE
New Delhi

From

8 - 13 January, 2024

Organized by

Department of Electronics Engineering
School of Engineering and Technology

Vivekananda Institute of Professional Studies Technical Campus
Accredited Grade A++ by NAAC
(Affiliated to Guru Gobind Singh Indraprastha University,
Recognised by Bar Council of India & AICTE)
NBA Accredied for MCA Programme,
Recognised under Section 2(f) by UGC, ISO 9001:2015 Certified Institution

ONE WEEK
FACULTY DEVELOPMENT PROGRAMME
8 - 13 January, 2024

About the Programme

Faculty Development Program (FDP) on "Semiconductor Fusion Nexus: Integrating Academic Insights and Industry Innovations" is a cutting-edge and comprehensive initiative aimed at fostering collaboration and knowledge exchange between academia and industry in the field of semiconductors. This program seeks to bridge the gap between theoretical knowledge and practical applications by creating a platform for educators, researchers, and industry professionals to come together and explore the latest advancements, challenges, and opportunities in semiconductor technology. By the end of the "Semiconductor Fusion Nexus" FDP, participants will not only gain a comprehensive understanding of the semiconductor landscape but also be better equipped to drive innovation, contribute to research, and prepare students for successful careers in this rapidly evolving field. Participants will have the unique opportunity to engage in hands-on workshops, practical demonstrations, and case studies, allowing them to gain practical experience and insights into semiconductor fabrication, design, testing, and applications.

Areas covered in FDP

1. **Semiconductor Fundamentals:**
   - Introduction to semiconductor materials, properties, and behavior.
   - Semiconductor physics and electronic band theory.
   - Semiconductor device types and characteristics (diodes, transistors, etc.).
   - Semiconductor fabrication processes and cleanroom protocols.

2. **Integrated Circuit Design:**
   - Overview of digital and analog integrated circuit design.
   - Semiconductor device modeling and simulation tools.
   - Design methodologies and considerations for different applications.
   - Introduction to field-effect transistors (FETs) and their role in modern IC design.
   -

3. **Advanced Semiconductor Technologies:**
   - Emerging semiconductor materials and technologies (nanotechnology, graphene, etc.).
   - 3D IC integration and packaging techniques.
   - Photonic and optoelectronic devices.
   - Quantum computing and its implications for semiconductor technology.

4. **Semiconductor Manufacturing and Processing:**
   - Semiconductor fabrication processes (lithography, etching, doping, etc.).
   - Cleanroom practices and contamination control.
   - Yield enhancement and defect management in semiconductor manufacturing.
   - Testing and Characterization:
   - Semiconductor device testing and parametric measurements.
   - Reliability and failure analysis of semiconductor components.
   - Non-destructive testing techniques.
   - Statistical analysis of test data.

5. **Industry-Academia Collaboration:**
   - Strategies for effective collaboration between academia and industry.
   - Technology transfer and knowledge exchange mechanisms.
   - Aligning academic curriculum with industry requirements.
   - Intellectual property considerations in collaborative projects.

6. **Emerging Trends and Applications:**
   - IoT (Internet of Things) and its impact on semiconductor technology.
   - Wearable electronics and flexible electronics.
   - Power electronics and energy-efficient semiconductor devices.
   - Semiconductor applications in automotive, healthcare, communication, and beyond.

7. **Innovation and Research:**
   - Encouraging innovation in semiconductor technology.
   - Research methodologies and best practices.
   - Identifying research gaps and opportunities in semiconductor research.
   - Publishing and presenting semiconductor research in academic and industry forums.

8. **Entrepreneurship and Startups in Semiconductors:**
   - Nurturing semiconductor-based entrepreneurial ventures.
   - Funding opportunities and challenges for semiconductor startups.
   - Commercialization of semiconductor innovations.

9. **Ethical and Societal Considerations:**
   - Environmental and ethical implications of semiconductor manufacturing.
   - Sustainability in semiconductor technology.
   - Social impact of semiconductor advancements.

10. **Practical Workshops and Case Studies:**
    - Hands-on sessions on semiconductor circuit simulation and design tools.
    - Case studies highlighting successful integration of academic research into industry projects.

ONE WEEK
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Registration Fee

There is no registration fee for the programme

Resource Persons

Resource persons are experts from Industries/ universities and institute of repute.

Eligibility

The programme is open to all members of AICTE/UGC affiliated Institutes/Universities i.e. Faculty Members, Research Scholars.

Selection and Certification Criteria

Selection will be done based on first-cum-first-serve basis and the confirmed candidate will be notified on receipt of registration from latest by 6th Jan., 2024. An online test will be conducted by the coordinator at the end of the programme. The certificates shall be issued to those participants who have attended the programme with minimum 80% attendance and scored minimum 60% marks in the test.

Important Date

Last date for submission of application 6th Jan., 2024.

How to Apply

The course is free of cost for eligible candidates. The participants have to submit duly filled registration form which is also available on the link on or before 6th Jan., 2024. **Intimation to selected candidates by 7th Jan., 2024.**

Guidelines

Session time will be from 09.30 AM to 05.30 PM. Coordinator decision will be final regarding the selection of participants.

Registration Link

https://atalacademy.aicte-india.org/signup

Contact for further information:

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