GLOBAL INITIATIVE OF ACADEMIC NETWORKS

Two-week
A special course on

TECHNOLOGY - BASED ENGINEERING ENTREPRENEURSHIP DEVELOPMENT PROGRAMME AND ADVANCED MANUFACTURING PROCESS

24th June to 5th July, 2019

College of Engineering Pune
(An autonomous Institute of the Govt. of Maharashtra)
Wellesley Road, Shivajinagar, Maharashtra, Pune 411005
Tel. No. +91 020 2550 7288 Fax: +91 020 2550 7299
www.coep.ac.in
About COEP

College of Engineering Pune (COEP), chartered in 1854, is a nationally respected leader in technical education. The institute is distinguished by its commitment to finding solutions to the great predicaments of the day through advanced technology. The institute has a rich history and dedication to the pursuit of excellence. COEP is a top-tier institute in India that boasts of a 165 year culture of academic excellence, scientific breakthroughs, and high-tech innovation. It is an autonomous engineering institute affiliated to Savitribai Phule Pune University (SPPU), Pune, Maharashtra, India.

COEP offers a unique learning experience across the spectrum of academic and social walks of life. With a firm footing in truth and humanity, the institute provides an understanding of both technical developments as well as the ethics that go along. The hallmark of COEP education is its strong and widespread alumni network, support of the industry and the camaraderie that the institute shares with several foreign universities. The institute has consistently been ranked high amongst the top technical institutes in India. The credit for most of the civil infrastructure in India goes to the notable alumni of this college, starting from none other than the most towering and illustrious engineer Bharat Ratna Sir M. Visvesvarayya, in whose honour, “Engineers Day” is celebrated.

The institute is reputed for excellent teaching and training in engineering and technology at graduate, post-graduate levels as well as for research and related activities. At present, COEP offers nine UG and twenty-three PG programmes, and has more than 3500 students enrolled to its various courses. Since its inception, COEP has been playing a vital role in producing quality engineers, introducing new programmes, and elective courses in emerging areas.

Patron
Prof. B. B. Ahuja
Director, COEP
Pune

International Expert
Prof. Ioan D. Marinescu
Director of Precision Micro-Machining Center
Mechanical, Industrial & Manufacturing Engineering Department, University of Toledo,
Toledo, Ohio, United States.

Head of the Department and Course Co-ordinator
Dr. Rajiv B.
Department of Production Engineering and Industrial Management
College of Engineering Pune
Overview

This course focuses on strategic planning coupled with entrepreneurship. Identifying and addressing advantages in the competitive market for business development is the key factor in both strategic planning and entrepreneurship. Using specific tools to develop goals, objectives, organizational systems as well as management structures is essential in the process of planning. To accomplish this task, this workshop has been divided into two components.

First, the subject of entrepreneurship is introduced. A rough draft of a written business plan (BP) will be developed. The BP will incorporate the processes of new idea creation as well as qualifying and quantifying the basis for the BP. A business plan draft is an individual project. A business plan outline will be provided to guide students efforts.

Second, an individual paper will be developed that addresses the special skills and characteristics of an entrepreneur. Individual presentations will be made at the end of the course on their paper. A special attention will given to the integration of business concepts.

Advanced manufacturing is the use of innovative technology to improve products or processes. One of the most widely used definitions of advanced manufacturing involves the use of technology to improve products and/or processes, with the relevant technology being described as “advanced,” “innovative,” or “cutting edge.” For example, one organization defines advanced manufacturing as industries that increasingly integrate new innovative technologies in both products and processes. The rate of technology adoption and the ability to use that technology to remain competitive and add value defines the advanced manufacturing sector. A well known author defines World Class Foundry (read manufacturing) as: “A World Class Manufacturing (WCM) is one which integrates the latest-gen machinery with (process/ work) systems to facilitate 'manufacturing'- based business development governed around manufactured products only, duly based over a high accent on Product Substitution or New Product Development.”

“Advanced manufacturing centers upon improving the performance of US industry through the innovative application of technologies, processes and methods to product design and production.” Finally, a recent survey of advanced manufacturing definitions by the White House and states: “A concise definition of advanced manufacturing offered by some is manufacturing that entails rapid transfer of science and technology (S&T) into manufacturing products and processes.” (PCAST, April 2010.)

Course Objectives

1. To develop an ability to use a policy and strategy in the survival and growth of a business
2. To develop an ability to the entrepreneurial and business planning processes
3. To develop a business plan outline and exhibit the components of a start-up and understand how the planning process is managed.
4. Learn to how to think strategy and creativity
5. To have an in-depth understanding of specialist bodies of knowledge within the engineering discipline
6. To understand the application of systematic engineering synthesis and design processes
7. To learn fluent applications of engineering techniques, tools and resources
Resource Persons

Prof. Ioan D. Marinescu

(Prof. Ioan D. Marinescu (Ph. D., 1991), Director of Precision Micro-Machining Center Mechanical, Industrial & Manufacturing Engineering Department, University of Toledo) Prof. Ioan has conducted many courses such as Manufacturing Entrepreneurship, Manufacturing Engineering, Advanced Machining of Brittle Materials, Material Removal Processes, Tribology of Manufacturing Processes, Nontraditional Machining, Product and Process Engineering, Tribology, Fundamentals of Grinding Technology, Production Tools and Tooling, Principles of Cutting, Engineering Graphics, Descriptive Geometry at various institutes like The University of Toledo, Kansas State University, University of Connecticut, Polytechnic Institute of Bucharest. He is a member and a fellow of many research societies. A few of them are Chairman, International Foundation for Production Research (IFPR). Member, Society of Tribologists and Lubrication Engineers, (STLE), 1993-present. Associate Member, International Institution for Production Engineering Research (CIRP), 1992-1993. Correspondent Member, International Institution for Production Engineering Research (CIRP), 1995-present. President, Romanian Society of Mechanical Engineers (RSME). He has published many books and papers. A total of 274 Publications are to his credit.


Dr. Rajiv B.

(Dr. Rajiv B is Associate Professor and Head of the Department of Production Engineering and Industrial Management, College of Engineering Pune (COEP), India.) Dr. Rajiv B. joined the institute in 2003 after completing his post graduation from COEP in 2002. Prior to his PhD, he received a B.E. degree in Production Engineering from Nagpur University in 1998, M.E degree in Production Engineering with specialization in Manufacturing Engineering & Automation from College of Engineering Pune in 2002. His research interests include metal cutting, reliability engineering and non-conventional manufacturing processes, with a special focus on EDM and laser cutting. He has contributed mainly to the areas of EDM & metal cutting. He has published about 50 articles in reputed journals and conferences. He has filed two patents and published a textbook. He completed several research and consultancy works.
## Duration of Course
25\textsuperscript{th} June, 2019 to 5\textsuperscript{th} July, 2019

### Modules
- The entrepreneurial perspective – Indian/Global Scenario, Idea generation, opportunity recognition & evaluation for business, Business plan present scope, Creativity & various model of entrepreneurship, Accounting for entrepreneurs
- Characteristics of successful entrepreneurship, Sources of finance, trademark, IPR, Licensing & franchising etc. Start-up venture, managing & coordination, Technology based EDP, Valuation.
- Various case studies of entrepreneurship, Value-added industrial product design, Business economy & accounting statutory regulations, etc., High technology areas of manufacturing
- Emergent areas in future – regional & global scenario, Team Leadership, Sales forecasting & marketing, Sustainable development in business strategy
- Social Entrepreneurship, Corporate responsibility, ethics & accountability, Micro and Nano Products, Bio-medical sensing aids, medical implants, precision measurement equipment etc.
- Introduction to: Modern Concept of Manufacturing, Basics of Manufacturing Processes, Chip Formation, Build-up Edge, Ductile Mode, Brittle Fracture Model, Single Point Cutting Operations, Diamond Turning, Hard Turning, Case studies in Hard Turning.
- Multi - Point Cutting Operations, Diamond and CBN Milling, Fluid Influence on Cutter Wear, MQL for Milling Operations, Case studies in MQL for Milling Operations
- UV Bonding of Abrasive Tools, UV Bonding Lapping Plates, Lap/Grind Hybrid Process, Nano-Polishing, Nano-Polishing of A1TiC Magnetic Heads, Case studies Nano-Polishing of Silicon Carbide

### Who can attend?
- Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories
- Students at all levels (B.Tech./M.Sc./M.Tech./Ph.D.) or Faculty from reputed academic and technical institutions

### Registration Fees

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<tr>
<th>Foreign Participants: USD 500</th>
<th>Indian Industry/ Research Organizations: Rs. 7500</th>
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<td>Indian Academic Institutions: Rs. 5000</td>
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The above fee includes all instructional material, computer usage for tutorials, 24 hour free internet facility. The participants will be provided with single bedded accommodation on payment basis.

### Guidelines for registration

**Step 1:** Visit and registrar yourself on (if not registered earlier)
http://www.gian.iitkgp.ac.in/

**Step 2:** Register for the course through your login and password to obtain GIAN registration number.

**Step 3:** Go to the portal and register for the course by selecting the course Technology Based Engineering Entrepreneurship Development Programme and Advanced Manufacturing Process

**Step 4:** Complete a Payment Procedure and get a Confirmation

Payment of registration fee can be made via Demand Draft or RTGS/NEFT.
- Demand Draft should be drawn in favour of "The Director, College of Engineering Pune", payable at Pune, Maharashtra.
- For RTGS/ NEFT payment, the details are as given below:

<table>
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<tr>
<th>The Bank account holder’s Name</th>
<th>The Director, College of Engineering Pune</th>
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<td>Name of the Bank</td>
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<td>Address of the Bank</td>
<td>Wellesley Road, Shivajinagar, Pune 411 005</td>
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For a confirmation of your registration, a proof of payment (a scanned copy of the Demand Draft/NEFT/RTGS transaction confirmation details) along with a registration form and a copy of the PDF generated at GIAN portal are to be emailed to: jkb.prod@coep.ac.in on/or before 3\textsuperscript{rd} June 2019. Please email your UTR number (after payment is made) and your name. Hard copies of the above documents have to be submitted in person on the first day of the course. For any further query, please contact the course coordinator Dr. Rajiv B.
**How to Reach:**

1. By Air: Pune International Airport (10 Km)
2. By Train: Pune Railway Station (3 Km)
3. By Bus: Shivajinagar Bus Stand (1 Km)
4. By Bus: Swargate Bus Stand (5 Km)

**Organising Members:**

Mr. Jameer Bagwan
Mr. Balaji Sontakke
Mr. J. S. Karajagikar
Mr. M. N. Shaikh
Mr. S. U. Ghunage
Dr. M. R. Dhanvijay
Dr. S. M. Patil
Dr. S. S. Anasane
Dr. B. U. Sonawane
Dr. P. D. Pantawane
Dr. M. D. Jaybhaye
Dr. (Mrs.) A.V.Mualy
Dr. (Mrs.) N.R.Rajhans

**Venue:**

Department of Production Engineering and Industrial Management,

Wellesley Road, Shivajinagar,

College of Engineering Pune [COEP]

Pune-411005
## Two-week Course on

**“Technology-Based Engineering Entrepreneurship Development Programme and Advanced Manufacturing Process”**

under GIAN 24th June to 5th July 2019

### Registration Form

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<th>Name of the Participant</th>
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<td>Participant’s Signature</td>
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<tr>
<td>Name of the Sponsoring Authority</td>
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<td>(Name &amp; Sign of The Director/Head of the Institute / The Principal / The HOD)</td>
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Signature of the sponsoring authority with institute seal and date :-

*Send a scanned copy of the registration form via email to jkb.prod@coep.ac.in and cc rbh.prod@coep.ac.in*

After you receive an approval email please send a hard copy of the registration form with a demand draft to the Course Coordinator

**Dr. Rajiv B.**

Associate Professor and HOD

Department of Production Engineering and Industrial Management

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