PONDICHERRY UNIVERSITY
(A Central University)

Bharat Ratna Dr. B.R. Ambedkar Administrative Building
R.V. Nagar, Kalapet, Puducherry – 605 014

Dr. J. SAMPATH
REGISTRAR (i/c)

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PU/PD3/492/2014/ 463 **Date : 28.09.2015**

CIRCULAR

The MHRD has invited proposals "Under the GIAN (Global Initiative for Academic Networks)" scheme to initiate the academic network internationally, the details of the scheme is attached herewith.

The HOD's are requested to submit the proposals in line with the scheme on or before 09.10.2015 for onward transmission to the MHRD.

REGISTRAR (i/c)

To:

1. All Deans / HODs, Pondicherry University.

Copy to:

1. The Systems Manager – with request to circulate through the UMS, please.

The Objectives of GIAN Programme

- To increase the footfalls of reputed international faculty in the Indian academic institutes.
- Provide opportunity to our faculty to learn and share knowledge and teaching skills in cutting edge areas.
- To provide opportunity to our students to seek knowledge and experience from reputed International faculty.
- To create avenue for possible collaborative research with the international faculty
- To increase participation and presence of international students in the academic Institutes.
- Opportunity for the students of different Institutes/Universities to interact and learn subjects in niche areas through collaborative learning process.
- Provide opportunity for the technical persons from Indian Industry to improve understandings and update their knowledge in relevant areas.
- Motivate the best international experts in the world to work on problems related to India.
- Develop high quality course material in niche areas, both through video and print that can be used by a larger body of students and teachers.
- To document and develop new pedagogic methods in emerging topics of national and international interest.

Broad Area of Interest

The proposal should be in one of the following areas:

- Physical Sciences
- Chemical, Bio-Chemical & Material Sciences
- Mathematical & Computer Sciences
- Life Sciences, Medicine & Healthcare
- Electronics, Electrical, Information & Communication Technology
- Mechanical Sciences & Infrastructure
- Earth & Environment Sciences
- Management
- Social Sciences
- Humanities & Liberal Arts
- Architecture, Design, Planning and Heritage
- Law and other Interdisciplinary categories

Global Initiative of Academic Network

(Faculty from outside India only can use this format)

Name of Faculty:

Affiliation:

Address:

Contact No:

Email:

Course Title:

Broad Area:

Overview :

In today's highly competitive business environment, management of physical assets (their selection, maintenance, inspection and renewal) plays a key role in determining operational performance and profitability of any business unit, manufacturing plant or industry that operate assets as a part of their core business. Asset Management, being the art and science of making right decisions and optimizing these processes, attempts to minimize the total life cost of assets and directly or indirectly influences manufacturing/production/operation/service cost, processes and quality, and throughput or delivery time. There is particular interest in the application of asset management principles to the management of engineering systems in any industrial unit where the cost and performance of the assets are of major significance.

Asset Management for any engineering system needs to focus on maintenance, renewal and enhancement activities, with an integrating mechanism, on delivering sustainable outputs valued by customers and funding providers at the lowest whole-life cost emphasizing on creating knowledge of how assets degrade and fail to optimize maintenance and renewal interventions. It is essential that industries across India, many organizations of which being asset-intensive, promote a consistent asset management approach to their infrastructures and systems in overall manufacturing, production and supply chain domain to develop their own methods, standards and framework for achieving excellence in business performance.

Internationally acclaimed academics, researchers and practitioners with proven knowledge, experience, and demonstrable ability in teaching, consultancy, research, and training in the field of Engineering Asset Management will deliver lectures and discuss cases in the course. The course will be planned and offered as per the norms set by IIT Kharagpur for ISWT subject.

Objectives :

The primary objectives of the course are as follows:

i) Exposing participants to the fundamentals of asset management practices,
ii) Building in confidence and capability amongst the participants in the application of asset management tools and techniques and mapping the organizational activities and problems in terms of Asset Management framework,
iii) Providing exposure to practical problems and their solutions, through case studies and live projects in asset management,
iv) Enhancing the capability of the participants to identify, control and remove asset management-related problems in engineering system.

Course details:

Module A: Process Synthesis

Lecture 1

Process Design Paradigm, Process Synthesis Approaches, Hierarchical Systematic Generation Task Coordination and Integration

Lecture 2:

Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 1.

Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification

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Lecture 9 :

Challenges for Means-Ends Analysis Approaches, Strategic Separation Scheme Synthesis for Nonideal Systems

Lecture 10:

Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 5

Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification

Module B: Process Design & Optimization

Lecture 11 :

Process Design Paradigm, Process Synthesis Approaches, Hierarchical Systematic Generation Task Coordination and Integration

Lecture 12:

Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 6.

Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification

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Lecture 19 :

Challenges for Means-Ends Analysis Approaches, Strategic Separation Scheme Synthesis for Nonideal Systems

Lecture 20:

Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves,

Opportunistic Separation Scheme Synthesis,

Tutorial 10

Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification

Teaching Faculty

Prof. Robert Langer is one of 13 Institute Professors (the highest honor awarded to a faculty member) at the Massachusetts Institute of Technology (MIT). Dr. Langer has written approximately 1,000 articles. He also has more than 600 issued or pending patents worldwide. Dr. Langer's patents have been licensed or sublicensed to over 200 pharmaceutical, chemical, biotechnology and medical device companies. He served as a member of the United States Food and Drug Administration's SCIENCE Board, the FDA's highest advisory board, from 1995-2002 and as its Chairman from 1999-2002. Dr. Langer has received over 160 major awards including the 2006 United States National Medal of Science; the Charles Stark Draper Prize, considered the equivalent of the Nobel Prize for engineers, and the 2008 Millennium Technology Prize (click here to read the article), the world's largest technology prize. He is the also the only engineer to receive the Gairdner Foundation International Award; 70 recipients of this award have subsequently received a Nobel Prize. Among numerous other awards Langer has received are the Dickson Prize for Science (2002), Heinz Award for Technology, Economy and Employment (2003), the Harvey Prize (2003), the John Fritz Award (2003) (given previously to inventors such as Thomas Edison and Orville Wright), the General Motors Kettering Prize for Cancer Research (2004), the Dan David Prize in Materials Science (2005), the Albany Medical Center Prize in Medicine and Biomedical Research (2005), the largest prize in the U.S. for medical research, induction into the National Inventors Hall of Fame (2006), the Max Planck Research Award (2008), and the Prince of Asturias Award for Technical and Scientific Research (2008). In 1998, he received the Lemelson-MIT prize, the world's largest prize for invention, for being "one of history's most prolific inventors in medicine." In 1989 Dr. Langer was elected to the Institute of Medicine of the National Academy of Sciences, and in 1992 he was elected to both the National Academy of Engineering and to the National Academy of Sciences. He is one of very few people ever elected to all three United States National Academies and the youngest in history (at age 43) to ever receive this distinction.

Who can attend

- Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories.
- Student students at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.

MHRD Scheme on Global Initiative on Academic Network (GIAN)

COURSE TITLE

Overview

In today's highly competitive business environment, management of physical assets (their selection, maintenance, inspection and renewal) plays a key role in determining operational performance and profitability of any business unit, manufacturing plant or industry that operate assets as a part of their core business. Asset Management, being the art and science of making right decisions and optimizing these processes, attempts to minimize the total life cost of assets and directly or indirectly influences manufacturing/production/operation/service cost, processes and quality, and throughput or delivery time. There is particular interest in the application of asset management principles to the management of engineering systems in any industrial unit where the cost and performance of the assets are of major significance.

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iv) Enhancing the capability of the participants to identify, control and remove asset management-related problems in engineering system.

Course details

Module A: Process Synthesis

May 27 Tuesday

Lecture 1 : 9:30 to 10:30 AM

Process Design Paradigm, Process Synthesis Approaches, Hierarchical Systematic Generation Task Coordination and Integration

Lecture 2: 10:45 to 11:45 AM

Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 1. 2:00 to 4 PM

Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification

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May 31 Saturday
Lecture 9 : 9:30 to 10:30 AM
Challenges for Means-Ends Analysis Approaches, Strategic Separation Scheme Synthesis for Nonideal Systems

Lecture 10: 10:45 to 11:45 AM
Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 5 2:00 to 4.00 PM
Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification

June 1 Sunday Break / Examination for students

Module B: Process Design & Optimization
June 2 Tuesday
Lecture 11 : 9:30 to 10:30 AM
Process Design Paradigm, Process Synthesis Approaches, Hierarchical Systematic Generation Task Coordination and Integration

Lecture 12: 10:45 to 11:45 AM
Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 6. 2:00 to 4 PM
Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated Distillation, Process Flowsheet Intensification
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June 6 Friday
Lecture 19 : 9:30 to 10:30 AM
Challenges for Means-Ends Analysis Approaches, Strategic Separation Scheme Synthesis for Nonideal Systems

Lecture 20: 10:45 to 11:45 AM
Residue Curve Theory, Separation Scheme Synthesis and Other Uses for Residue Curves, Opportunistic Separation Scheme Synthesis,

Tutorial 10 2:00 to 4.00 PM
Problem solving session with examples: Heat Exchanger Networks, Heat-Integrated

Distillation, Process Flowsheet Intensification

June 7 Examination for students

Teaching Faculty

Prof. Robert Langer is one of 13 Institute Professors (the highest honor awarded to a faculty member) at the Massachusetts Institute of Technology (MIT). Dr. Langer has written approximately 1,000 articles. He also has more than 600 issued or pending patents worldwide. Dr. Langer's patents have been licensed or sublicensed to over 200 pharmaceutical, chemical, biotechnology and medical device companies. He served as a member of the United States Food and Drug Administration's SCIENCE Board, the FDA's highest advisory board, from 1995-2002 and as its Chairman from 1999-2002. Dr. Langer has received over 160 major awards including the 2006 United States National Medal of Science; the Charles Stark Draper Prize, considered the equivalent of the Nobel Prize for engineers, and the 2008 Millennium Technology Prize (click here to read the article), the world's largest technology prize. He is the also the only engineer to receive the Gairdner Foundation International Award; 70 recipients of this award have subsequently received a Nobel Prize. Among numerous other awards Langer has received are the Dickson Prize for Science (2002), Heinz Award for Technology, Economy and Employment (2003), the Harvey Prize (2003), the John Fritz Award (2003) (given previously to inventors such as Thomas Edison and Orville Wright), the General Motors Kettering Prize for Cancer Research (2004), the Dan David Prize in Materials Science (2005), the Albany Medical Center Prize in Medicine and Biomedical Research (2005), the largest prize in the U.S. for medical research, induction into the National Inventors Hall of Fame (2006), the Max Planck Research Award (2008), and the Prince of Asturias Award for Technical and Scientific Research (2008). In 1998, he received the Lemelson-MIT prize, the world's largest prize for invention, for being "one of history's most prolific inventors in medicine." In 1989 Dr. Langer was elected to the Institute of Medicine of the National Academy of Sciences, and in 1992 he was elected to both the National Academy of Engineering and to the National Academy of Sciences. He is one of very few people ever elected to all three United States National Academies and the youngest in history (at age 43) to ever receive this distinction.

Who can attend

- Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories.
- Student students at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.

Registration Fees

Participants from abroad : US $500

Industry/ Research Organizations:

Any of two modules : Rs. 20000/- All modules : Rs. 30000/-

Academic Institutions:

All modules : Rs. 10000/-

The above fee include all instructional materials, computer use for tutorials, 24 hr free internet facility. The participants will be provided with single bedded accommodation on payment basis.

PROPOSED BUDGET

Sl No	Description of budgetary head per Course	Amount (Rs.)
1	International Expert Air Fare,	2,00,000
2.	Honorarium to Expert (Item 1 + Item 2 should not exceed 8000 or 12000 USD)	2,00,000
3	Lecture Notes/video-learning material preparation	50,000
4	Contingency	50,000
5	Video recording expenses	25,000
6	Miscellaneous expenditure	25,000
7.	Host Faculty Honorarium	30,000
8.	Coordinator Honorarium	20,000
	GRAND TOTAL	**6,50,000**

Honorarium to host faculty and local coordinator should be paid from the earning for the subject through fee collection.

Course Coordinators

Professor Pradip Kumar Ray
Principal Coordinator
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