F.No.19-1/2014-TS.VII
Government of India
Ministry of Human Resource Development
Department of Higher Education

Shastri Bhawan, New Delhi,
Dated June 30, 2014

To,
1. **The Secretaries of Technical Education of all States /UTs,**
2. **The Directors of Technical Education of all States/UTs,**
3. **The Member Secretary, AICTE**
4. **The Directors of all IIT's / IISc, Bangalore and IIITs,**
5. **The Directors of all IIM's / NITIE, Mumbai**
6. **The Vice-Chancellors of all Central Universities / States Universities.**
7. **The Directors of all NITs**
8. **The Director s of all NITTTR's / NIFFT-Ranchi,**
9. **The Directors of SLIET-Sangrur/ NERIST-Itanagr.**

Subject: - Short term faculty secondment to AIT, Bangkok by the Government of India for a period of upto 16 weeks – Invitation of nominations for semester commencing August 2014 & January 2015 - regarding.

Sir/Madam,

I am directed to say that Asian Institute of Technology (AIT), Bangkok is an autonomous international post graduate institute providing advanced education in engineering, science and allied fields. The AIT academic year has two terms which begin in August and January. The Government of India provides support to the AIT by way of faculty secondment for a period of upto 16 weeks in selected areas of specialization for above two terms. The areas under consideration for faculty secondment for August 2014 and January 2015 are enclosed.

2.   The entire cost of secondment of Indian faculty to AIT, Bangkok including cost of air passages both ways and maintenance etc. is borne by the Government of India. Normally the period of secondment is upto 16 weeks each to coincide with an academic term of AIT, Bangkok. The seconded faculty are entitled to draw their pay plus special pay, if any, and allowances as admissible to them in India but for their deputation abroad. Their pay and allowance etc are drawn and disbursed in India in Indian Currency. The seconded faculty are entitled to daily allowance in Bangkok as admissible vide Ministry of External Affairs orders in this regard issued from time to time. The exact amount of daily allowance in Bangkok depends on the rate determined by the Ministry of External Affairs for the particular period. Besides this, AIT also provides accommodation in the campus at subsidized rates subject to availability. The seconded faculty is entitled to travel by air by economy class in shortest route from the nearest port of embarkation in India to Bangkok

and back carrying excess baggage upto 10 kgs. for which the Government of India meets the expenditure. The above-mentioned terms and conditions of secondment are tentative and subject to approval by the Ministry of Finance at the time of secondment. The salary in respect of faculty during the period of deputation will be met by their respective State Government / Institution themselves. In addition, the leave salary, contribution of Provident Fund/General Provident Fund and Pension Contribution etc. in respect of the faculty deputed will be met by the respective State Govt. / Institution themselves.

3.   You are requested to kindly give wide publicity of this scheme in your institution especially in the Departments covering the areas in which faculty secondment is being planned for the year 2014-2015. The nominee should have a doctorate degree in the relevant area, postgraduate teaching experience relevant to the course description indicated against the area and substantial research publications in the area to his credit. Nominations may kindly be sent in respect of only those candidates, who could be spared, in the event of their selection, for undertaking the proposed assignment at AIT, Bangkok for a period upto 16 weeks for the terms as indicated against each course. Since it is the endeavour of the Government to send best faculty from India to project the right kind of images at the international level, you are requested to kindly forward only those nominations that would be meeting the above mentioned requirement. The Selection Committee gives its recommendations to the Government on the basis of the bio-data of the nominees placed before it. Therefore, five copies of the bio-data of the faculty recommended for consideration of the Selection Committee may be sent to this Ministry in the enclosed format as per **Annexure-1**. The above details relating to short term faculty secondment to AIT, Bangkok may also be seen at MHRD web-site **www.education.nic.in**

4.   The last date for receipt of nomination in this Ministry is **18th July, 2014**. The nominations are required in five copies duly screened and recommended by the Head of the Institution/Competent State Govt. Authority and to be sent to the following address:

Dalip Kapur
Deputy Secretary (T)
Department of Higher Education,
Ministry of Human Resource Development
Room No. 426-C
Shastri Bhawan,
New Delhi-110 115

Yours faithfully,

(Dalip Kapur)
Deputy Secretary (T)
Tele: 23385220/Fax: 23070928

Encl: as above.

Copy to NIC with request to put up the above notice on MHRD website for wide publicity.

CMIS(oP)
Sanjay
02.07.2014

BIO-DATA	
(To be submitted in 5 copies)	
AREA OF ASSIGNMENT FOR WHICH NOMINATION SENT	
COURSE NO.	
COURSE TITLE	
TERM APPLIED FOR	

1.	Name (Expanded initials)	:	
2.	Date and Place of Birth	:	
3.	Nationality	:	
4.	Present Post held with complete address of the Institute.		
5.	Present Postal Address Tel. No. /Fax No./E-Mail/Mobile No.	:	
6.	Educational Qualifications	:	

Degree/ Diploma	Division/ Grade	Year	Subjects Taken	Name of University/ Institute

7. Professional Experience:

Address of the Office, Organization or Institution	Post held	Duration		Specific experience: P.G. Teaching/Research Industrial
		From	To	

8. Details of Published work: Books, Articles, Monographs, Papers (If the Space below is insufficient please give full particulars on a separate sheet of paper)

9.	Summary of recent/current projects undertaken			
10	Current Interests and Assignments			
11.	(a) Visits abroad:			

Country Visited	Duration of Visit		Purpose of visit
	From	To	

(b) Previous assignment with AIT, if any:

Term	Course taught	Seconded by Government of India or directly hired by AIT

12	Any other relevant information:

Signature of Applicant.

13	Remarks of Head of the Institution:

Signature of the Head of the Institution with Office seal.

SELECTED Courses to be taught by Indian Seconded Faculty

FOR AUGUST 2014 SEMESTER

I.   School of Engineering and Technolngy (August 2014 Semester)

#	Course Title	Priority	Course Description	Credots
1	AT 72.01 Deterministic Optimization Models	High	Deterministic optimization modeling, software packages, linear programming, integer programming and combinatorial optimization, dynamic programming, network flow, nonlinear programming.	3 (3-0)
2	AT 73.02 Advanced Manufacturing Processes	High	Structural properties of engineering materials, subtractive manufacturing process, unconventional manufacturing processes, additive manufacturing processes, formative manufacturing processes, rapid prototyping systems, environmental aspects.	3 (3-0)
3	AT74.04 Digital and Analog Circuit Design	High	Operation of Semiconductor Devices. Design of Transistor Circuits. Digital Integrated-Circuit Building Blocks. Amplifier Circuits and Systems. Additional Electronic Building Blocks. Analog and Digital Measurement	3 (2-3)
4	AT 77.05 Teletraffic Engineering	High	Traffic Flows in Networks. Dimensioning of Loss and Delay Systems. Loss and Delay in Switching Systems. Traffic Measurements. Multi-Dimensional Traffic. Traffic Models for ATM and Internet.	3 (2.5-1.5)
5	AT76.15 Microwave Remote Sensing	High	This course is designed to provide fundamental knowledge and theories of microwave remote sensing. After reviewing the fundamentals of electromagnetics, both real aperture and synthetic aperture radar systems are to be introduced including physical principles.	2 (2-0)
6	AT81.02 Digital Integrated Circuit Design	High	Digital Systems Design Process and CAD Tuols. Combinational and Sequential Circuits Design and Implementation. Input/Output Design and Clock Generation. Design of Memory. Hardware Description Language (HDL). Rapid Prototyping and Implementation of Digital Systems. Memory System Design and Test. Testing and Design for Testability (DFT).	3 (2-3)
7	AT 81.05 Analog Integrated Circuit Design	High	IC technology, device modeling and layout, Basic analog sub circuits, Noise analysis and modeling, Basic operational amplifier design, Advanced operational amplifiers, Comparators, Integrated filters, Data converters.	3 (2-3)
8	CE 74.12 Hydrodynamics	High	Fluid properties, fluid pressure, fluid forces, theory and applications of fluid dynamics, governing equations of continuity, momentum, energy and moment of flow momentum, hydrodynamic similitudes, laminar and turbulent flows, boundary layers, flow in pipes, open channels, hydraulic structures and hydraulic machinery.	3 (2-3)
9	AT74.01 Kinematic and Dynamic of Mechanisms and Robot	Medium	Components of Mechanism. Planar Kinematics Analysis and Modeling. Linkage Design. Dynamics of Planar Systems. Spatial Mechanisms. Industrial Robotics. Manipulator Kinematics. Trajectory Planning. Manipulator Dynamics and Control. Case Studies.	3 (2-3)

#	Course Title	Priority	Course Description	Credots
10	AT 73.17 Advanced Material Science for Design and Manufacturing	Medium	Metals, Non-Ferrious Metals, Compsite Materials and Processes, Plastics, Coatings, Finishes and Adhesives, Testing for Materials, Deterioration of Materials, Economics of Material Selection, Case Studies of Material Selection.	3 (3-0)
11	CE 74.12 Hydrodynamics,	Medium	Components of hydrologic cycle, hydrologic transport; statistical methods in hydrology; frequency analysis, time analysis; hydrologic technology: data collection, forcasting, hydrologic design.	3 (3-0)
12	CE.74.21 Irrigation and Drainage Engineering	Medium	Soil water physics; irrigation development; crop/irrigation water requirements and scheduling; irrigation planning and design (basin, border, furrow, sprinkler and trickle systems); drainage criteria; steady/non-steady flow to drains; design discharges, surface/subsurface drainage systems design; irrigation drainage structures; land grading and excavation, laboratory/field exercises and measurements.	3 (2-3)
13	CE 51 River Engineering and Modelling	Low	River flow hydrology, sediment transport characteristics, mode of sediment transport, bed forms, sediment transport formulas, alluvial roughness; design of stable channels, sediment transport measurements, river engineering works, analytical and numerical modeling of river morphology; sedimentation in reservoirs and its computational methods, reservoirs sedimentation surveys; water quality characteristics, advection/diffusion and mixing process of water quality, water quality modeling and applications through case studies.	3 (3-0)

II. School of Environment, Resources and Development (August 2014 Semester)

#	Course Title	Priority	Course Description	Credits
14	ED 71.9010: Aquaculture business Management: Issues & Tools	High	Aquaculture, Management, Qualit, Standards, ISO	2(2-0)
15	ED79.20 Urban Planning and Environmental Design	High	Conventional and contempary ideas in urban planning: goal, objectives, and processes of management of urban area; principles of eco-sensitive environmentl resolution of urban environmental problems through local initiative and innovations; environmental design for disadvantaged and vulnerable groups	3(3-0)
16	ED 76.01 Ecological Principles for Natural Resources Management	High	Patterns and ecological processes that occur across tropical and subtropical forest ecosystem in Asia. Throughout the course, strong linkages will be made between the ecology of a tropical terrestrial ecosystems and how such knowledge can be used to inform natural resource management decisions	3(3-0)
17	ED 73.08 Numerical Computations of Food Processing Engineering	High	The role of numerical computations in food process engineering; survey of numerical techniques and their application to a wide variety of problems; solution schemes for ordinary and partial differential equations; and computer modeling of selected food processing operations.	3(2-3)

#	Course Title	Priority	Course Description	Credits
18	ED78:36 Drinking Water Treatement	High	Physical principles and design criteria used in separating liquids and solids from liquid, particularly those having application in water and waste treatment systems: screening, filtration, size/volume reduction, mixing, sedimentation, flotation, flocculation, dissolved air flotation, adsorption, absorption, evaporation, drying, centrifugation, ozonation and membrane filtration.	3(3-0)
19	ED 71:04 Aquatic Seed Production	Medium	Natural reproductive strategies of fish: molecular basis of reproduction; environmental and endocrine control of reproduction; breeding and nursing techniques of commercially important species, brood fish management; overview of hatchery design and management: fish seed storage and transportation	3(3-0)
20	ED 76.04 Biodiversity and Conservation	Medium	Diversity and its assessment; approaches to biodiversity conservation; planning and management of protected areas; biodiversity conservation outside protected areas	3(3-0)

III. School of Management (August 2014 Semester)

	Course Title	Priority	Course Description	Credits
21	SM80:08 International Marketing and Export Management	High	Exporting, globalization of Markets, Standization vs. Regional responsiveness, Market Entry Strategies, Global market research, global product policy, global pricing, global advertisement.	3 (3-0)
22	SM 80.13 Marketing Research	High	Marketing research plan, international marketing research, secondary data sources, demand estimation, frequent data errors, data collection methods, cross-cultural market research, non-survey data collection techniques, qualitative market research, survey research.	2(2-0)

FOR JANUARY 2015 SEMESTER

IV.   School of Engineering and Technology (January 2015 Semester)

#	Course Title	Priority	Course Description	Credits
1	AT 72.09 Inventory and Logistics Management,	High	Review of inventory system, traditional inventory models for independent demand, dependent demand system – material requirements planning (MRP), advanced production/ inventory models, introduction to logistics and supply chain management, logistics and supply chain processes.	3 (3-0)
2	CE 74.22 Irrigation and Drainage System Management	High	Irrigation and drainage issues; water management schemes; conjunctive use of water; deficit irrigation; water table management; water delivery control systems; water logging and salinity control; irrigation and drainage systems operation and maintenance; land improvement and reclamation; performance indicators and evaluation; water conflicts resolution; socio-economic, institutional and environmental aspects; cost/benefit analysis.	3 (3-0)
3	AT 81.11 Mixed Signal IC	Medium	Mixed Signal Mixed Signal IC Design, Design of Switched Capacitor Circuits, Design of Data Converter Circuits, Design of Phase Locked Loop and Frequency Synthesizers	3(2-3)
4	AT74.07 Automation Technology	Medium	Principles of Automation Technology. Programmable Logic Controllers (PLC). Digital Communication. Feedback Control. Man-Machine Communication.	
5	CE74.53 Land and Water Conservation and Management	Medium	Rainfall-runoff relationships, erosion processes, erosion types, mechanical protection measures, diversion and drainage structures, gully stabilization, streambank stabilization, water harvesting, design of conservation structures, land-management approaches, biological measures, agronomic measures, agroforestry, watershed-scale approaches and measures, soil-erosion research methods, soil-erosion prediction models.	3(2.5-1.5)
6	CE74.61 Flood Modelling and Management	Low	Flood hydrology, flood characteristics; flood modelling, flood routing methods in river basins, river channels and overbank flow areas; flood forecasting models, deterministic and stochastic models, artificial neural network; flood control and management, flood control measures: flood risk analysis and mapping; flood plain development and management, flood damages; and feasibility of flood control projects.	3 (3-0)
7	AT77.13 Digital Communications	Low	Source coding, signal analysis, communications through additive white Gaussian noise (AWGN) channels, optimal detection, signal constellations, block and convolutional codes, information theory, Shannons channel capacity.	3 (3-0)
8	AT 74.08 Microprocessor Systems	High	Microcomputer structure and operations; microprocessor and memory; assembly language programming; bus system; microprocessor interfacing, serial and parallel transmission, interrupts; networks and multiprocessor system; microcomputer development system; microcomputer operating systems; application examples.	3(2-3)

V.   School of Environment, Resources and Development (January 2015 Semester)

#	Course Title	Priority	Course Description	Credits
9	ED79.04 Environmental Science and Technology for Decision Markers	High	Introduction for planners, managers, and decision makers to environmental science, engineering and technology; ecosystem and understanding of its carrying capacity, cycle of elements in environment, environmental protection vs. development; urban ecology, environmental resources and population growth, environmental effects and sustainable development; parameters used in environmental science, decision making on pollution, pollution standards, health effects, risk model and assessment, and setting priority for action; and effects of urban pollution (air, noise, odor, water, wastewater land, solid waste and toxic waste), and treatment technologies, the roles of energy, transport, industry and the environment.	3(3-0)
10	ED76.03 Forestry	High	Forest management aspects: assessment, industrial management, and community-based management. Set within the context of Asia, this course will discuss the techniques to evaluate, monitor and analyze forests and forest management practices, as well as theory and application of emerging areas of forest management towards sustainable development and conservation. Hands-on experience in forest mensuration and assessment will be gained through one weekend-long field trip to a forest monitoring project.	3(3-0)
11	ED 79.16: Environmental Conflict Resolution and Mediation	Medium	Theories of social conflict and environmental conflict (natural and built); development interface analysis; negotiation and mediation, conflict management skills, and negotiation ethics	3(3-0)

VI.   School of Management (January 2015 Semester)

#	Course Title	Priority	Course Description	Credits
12	SM 80.06 Innovation Marketing and New Product Development	high	Innovation success, innovation failure, new product development techniques, disruptive technologies, diffusion of innovations, service innovations, market testing.	3(3-0)
13	SM80.9043 Strategic Brand Management	High	Management of Brands, Brand equity, Brand identity, Brand essence, Brand elements, logos, Brand associations, Brand personality	3(3-0)