

**File No. 13020/1/2019-IES (Part 1)**  
**Government of India**  
**Ministry of Finance**  
**Department of Economic Affairs**  
**(IES Cadre)**  
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**Room No.59, North Block,**  
**New Delhi Dated: 15<sup>th</sup> October 2020**

**OFFICE MEMORANDUM**

**Subject: Inviting application for 3 In-Service Training Programmes for IES officers to be held in the month of December, 2020 and January, 2021.**

IES Cadre being the Cadre Controlling Authority for the officers of the Indian Economic Service (IES) is conducting three In-Service training programmes as mentioned below:

- i. **Online Programme on “Management Development Programme on Data Analytics & Applied Machine Learning with R” with IIT Kharagpur for 30 IES participants from 5<sup>th</sup> December to 20<sup>th</sup> December, 2020.** The detailed schedule may be seen as attached herewith.
  - ii. **Online Programme on “Digital Transformation in Governance and Public Policy” with IIT Karaghpur for 50 IES participants from 2<sup>nd</sup> January to 17<sup>th</sup> January, 2021.** The detailed schedule may be seen as attached herewith.
  - iii. **Online Government Executive Programme on “Building Competencies for Personal Excellence” from Art of Living, Bangalore for 25 IES Participants from 10<sup>th</sup> December to 13<sup>th</sup> December, 2020.** The program is focused on interaction, demonstration and practice of yoga, meditation and breathing techniques, activities and group discussions. The timings of the programme would be- 6 am to 8.30 am on 10th and 11th December (Thursday and Friday) and 7 am to 9.30 am on 12th and 13th December (Saturday and Sunday).
2. **The IES Cadre will bear the Programme fee for the aforementioned trainings.** Interested IES officers may convey their willingness through proper channel to the undersigned at Room No.59, Department of Economic Affairs, North Block, New Delhi-110001 or via e-mail at [seema.jain74@nic.in](mailto:seema.jain74@nic.in) on or before 06.11.2020.
3. This issues with approval of the Competent Authority.



(Seema Jain)  
Deputy Director (IES)  
Tel: 011-2309-5219

**To,**

All IES Officers via email

**Indian Institute of Technology Kharagpur**  
**Vinod Gupta School of Management**  
Proposed Management Development Programme on  
**Data Analytics & Applied Machine Learning with R**  
for Officers of Indian Economic Service [3 Week Online Programme]  
Location: Vinod Gupta School of Management (VGSOM), IIT Kharagpur

**Proposed Schedule**

<b>Week 1</b>	
<i>5<sup>th</sup> December (9AM-12PM)</i>	
Session 1	Introduction to Big Data Analytics
Session 2	Basic Data Handling with R Programing
<i>5<sup>th</sup> December (2PM-5PM)</i>	
Session 3	More Data Handling with R Programing
Session 4	Basic Statistics and Probability, Probability Distributions
<i>6<sup>th</sup> December (9AM-12PM)</i>	
Session 5	Hypothesis Testing – t test
Session 6	Hypothesis Testing – F test and ANOVA, Chi square test
<b>Week 2</b>	
<i>12<sup>th</sup> December (9AM-12PM)</i>	
Session 7	Linear Regression
Session 8	Logistic Regression
<i>12<sup>th</sup> December (2PM-5PM)</i>	
Session 9	Machine Learning Technique – Artificial Neural Network
Session 10	Machine Learning Technique – Decision Tree
<i>13<sup>th</sup> December (9AM-12PM)</i>	
Session 11	Machine Learning Technique – Naïve Bayes for Sentiment Analysis
Session 12	Cluster Analysis for Segmentation
<b>Week 3</b>	
<i>19<sup>th</sup> December (9AM-12PM)</i>	
Session 13	Data Visualization using Power BI
Session 14	Data Visualization using Power BI
<i>19<sup>th</sup> December (2PM-5PM)</i>	
Session 15	Forecasting Techniques
Session 16	Forecasting Techniques
<i>20<sup>th</sup> December (9AM-12PM)</i>	
Session 17	Prescriptive Analytics
Session 18	Prescriptive Analytics

## **Details**

# All sessions are of 90 Min duration.

# 2 Extra doubt clearing sessions (2 hour each) on 13<sup>th</sup> and 20<sup>th</sup> December from 3PM to 5PM

# Total duration of the program = 30 hours

# Sessions will be taken using MS Teams/Zoom and LMS

# We will conduct 4 quizzes (MCQ) and 3 assignments (take home).

## **Resource Persons**

### **Dr Swagato Chatterjee (B.Tech, IITKGP; FPM, IIM Bangalore)**

Prof Swagato Chatterjee, an IIT-IIM alumni, has a rich client base for MDP and consultancy projects on analytics: Ministry of Finance, Ernst & Young, Yes Bank, CSC, Namura, Mitsubishi, Toyota, GE, Times of India, Coca-cola, NTPC, HPCL, Indian Oil, Philips, RPG Group etc. He brings in a mixture of industry experience and academic knowledge in the class to cater to audience of different seniority levels.

### **Dr Sujay Bhattacharya (PhD, IIITM, Gwalior)**

Prof. Sujoy Bhattacharya's area of interest is business analytics. Prof. Bhattacharya is proficient in R and Python softwares. Prof. Bhattacharya can handle complex business analytics problems with varied applications.

### **Dr Parama Barai (MTech, IISc Bangalore; FPM, XLRI Jamshedpur)**

Prof. Parama Barai has six years' teaching experience in finance related subjects, specifically in the areas of investment management, financial analytics, financial risk modeling, derivatives, capital budgeting, and corporate finance. Prof. Barai also conducts research in these areas.

### **Dr Saini Das (FPM, IIM Lucknow)**

Prof Saini Das is an assistant professor in the area of business analytics and information systems. Before joining IIT Kharagpur, she has taught in IIM Indore as a faculty of information systems area. Her expertise is in cyber security, e-commerce and management information systems.

## **Program Co-ordinator**

**Principal coordinator:** Dr Swagato Chatterjee

## **Short Term Course**

**On**

# **Digital Transformation in Governance and Public Policy: IoT, Cloud, Industry 4.0, Blockchain, AIML and Digital Communication**

**Date: Weekends only 2<sup>nd</sup>-17<sup>th</sup> Jan 2021 | Venue- Online**



**To be Organized**

**by**



**Vinod Gupta School of Management  
Indian Institute of Technology Kharagpur  
Kharagpur 721302  
INDIA**

## **INTRODUCTION**

With the advancement of computational technology, digital transformation has become an inevitable part of governance and public policy. For gaining better performance through data driven decision making, tools and concepts such as IoT, Cloud, Industry 4.0, Blockchain and AIML has become inevitable skillset that every public-policy officer, at least at a basic level. The amalgamation of these key concepts leads to success in the better governance and economic development. In this program, we help the executives to connect these dots to ensure that they become digitally literate. The program helps future leaders to be technology ready.

## **OBJECTIVES OF THIS COURSE**

- This programme will teach the participants about the key concepts of digital transformation in public policy and governance
- It will also teach the participants how the digital tools can be used in business
- The programme will help the participants use the acquired skills in solving assignments and case studies.

## **KEY FEATURES**

- Learn from IIT Kharagpur faculty and industry leaders
- 20 hours interactive training
- Certificate from VGSOM and IIT Kharagpur, Continuing Education Program

## COURSE CONTENTS

SLNO	Topics	Teaching Sessions
<b>2<sup>nd</sup> January 2021 (10am – 12pm)</b>		
1	Introduction to Digital Transformation: Its role in public policy and governance	2 hr
<b>2<sup>nd</sup> January 2021 (3pm-5pm)</b>		
2	Introduction to Industry 4.0	2 hrs
<b>3<sup>rd</sup> January 2021 (10am – 12pm and 3pm-5pm)</b>		
3	Key knowledge about Internet of Things: Evolution, Adoption, Business Models, Pricing and Key Technologies	4 hrs
<b>9<sup>th</sup> January 2021 (10am – 12pm and 3pm-5pm)</b>		
4	What is cloud business? Why, when, and how of Cloud?	4 hrs
<b>10<sup>th</sup> January 2021 (10am-12pm)</b>		
5	Block-chain in Governance	2 hrs
<b>16<sup>th</sup> January 2021 (10am – 12pm)</b>		
6	AIML and its application in public policy and governance	2 hrs
<b>16<sup>th</sup> January 2021 (3pm – 5pm)</b>		
7	Public Policy and Governance Communication in Digital Age	2 hrs
<b>17<sup>th</sup> January 2021 (10am – 12pm)</b>		
8	Capstone Group Project Presentation	2 hrs

## PEDAGOGY

The methods consist of lecture sessions, hands-on-exercises, discussion on cases and live problems.

Academicians with proven knowledge, Industrial experience, and demonstrable and related areas will deliver lectures and analyze case studies.

4 Online quiz will be taken on the course, marks will be given based on individual performance in the quiz and the final performance in the group presentation

## TARGET PARTICIPANTS

Officers of Indian Economic Services

## FACULTY MEMBERS

### **Prof Pradip Kumar Ray**

Professor Pradip Kumar Ray is the Dean of Vinod Gupta School of Management, IIT Kharagpur and a professor at the Department of Industrial and Systems Engineering of Indian Institute of Technology (IIT), Kharagpur, India. His research interests include Productivity Management/Modeling and Analysis of Manufacturing and Service Organizations, Quality Design and Control, Total Quality Management, Process Optimization, Ergonomics/Human Factors Engineering, Safety Engineering, Modelling and Analysis of Healthcare Management Systems, and Industrial/Production System Sustainability.

### **Dr. Swagato Chatterjee**

Dr. Swagato Chatterjee, an IIT-IIM alumni, has a rich client base for MDP and consultancy projects on analytics: Ernst & Young, Yes Bank, CSC, Namura, Mitsubishi, Toyota, GE, Times of India, Coca-cola, Indian Oil, BEL, NTPC, HPCL, Philips, Piramal, RPG Group etc. He brings in a mixture of industry experience and academic knowledge in the class to cater to audience of different seniority levels.

### **Dr. Saini Das**

Dr. Saini Das has served as a faculty member at IIM Indore for three years before joining IIT Kharagpur. She also worked as a software engineer at Infosys Technologies Ltd. prior to her PhD. Her major teaching interests and competencies are in the areas of business analytics, information security risk management in networks, management information systems (MIS), e-commerce technology & applications, data privacy and digital piracy. Prof. Das has taught in many management development programs across industries. She has authored papers in many national and international journals of repute

### **Prof. Surojit Mukherjee**

Prof. Mookherjee's experience includes 15 yrs of industrial research, manufacturing, operations, joint venture set up in the field of metal cutting tool and powder metallurgy. Post his industrial stint, he migrated to SAP project implementation and management, Business consulting, IT Outsourcing, Program management and IT Service sales for global clients. During this period of 18 years, he worked with Pricewaterhouse Coopers and IBM India.

### **Dr. Biswarup Ghosh**

Biswarup Ghosh teaches Marketing Management, International Marketing & Strategic Marketing courses at VGSOM. He has more than 30+ years Healthcare Industry experience & worked as Head of Healthcare at Linde India Ltd (Part of Linde Group, Germany), Director South East Asia at STERIS India Ltd (wholly owned subsidiary of STERIS Corporation USA), General Manager -Marketing at DatexOhmeda (Part of GE Healthcare USA), Zonal Business Head at BOC India Ltd (Part of BOC Plc. UK ). He has extensive industry experience on General Management, Establishing Indian entity of large US MNC, Managing P & L of large Healthcare Business of India & Indian Subcontinent, International Marketing exposure in Singapore, Thailand & Malaysia markets. He did his PhD in Plasma Physics & MBA from VGSOM, IIT Kharagpur

# **COURSE COORDINATORS AND ADDRESS FOR COMMUNICATION**

## **Course coordinator**

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