

NITIE
National Institute of
Industrial Engineering



BITS Pilani
Pilani Campus

Global Online Certification Course on

Competing in Business through AI-Powered Supply Chains 2022

Course Schedule:

October 29, 2022 – December 4, 2022

(5:00 PM – 7:30 PM IST | Saturday & Sunday)

30 hours duration

Registration Deadline:

October 25, 2022



Course Instructed by



Prof. David Simchi-Levi

Professor – Business & Supply Chain Analytics
Director, Data Science Lab
Massachusetts Institute of Technology, USA

Chief Patrons



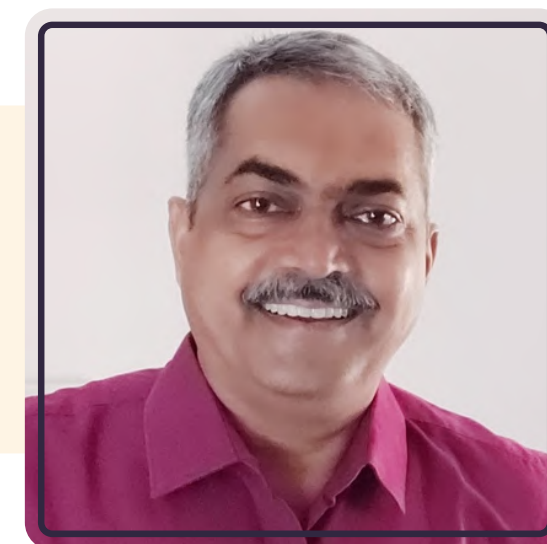
Prof. Souvik Bhattacharyya

Vice Chancellor, BITS Pilani



Prof. Manoj K. Tiwari

Director, NITIE Mumbai



Prof. Sudhirkumar Barai

Director, BITS Pilani

About the Course

Business analytics refers to how enterprises such as businesses, non-profits, and Governments can use data, analytics, and automation to gain insights and make better decisions. Business analytics is applied in operations, marketing, finance, and strategic planning, among other functions. The ability to use data effectively to drive rapid, precise, and profitable decisions has been a critical strategic advantage for companies as diverse as Dell, Walmart, Google, Nike, Capital One, and Disney.

For example, Walmart uses analytics to monitor and update its inventory in a way that allows it to serve its customers at an exceptionally low cost; Dell applied analytics to segment and better manage its supply chain; and Ford and Schneider Electric use data and analytics to significantly improve the resiliency of their supply chain and better respond to a disruption anywhere in their network.

Today, analytics is an integral part of modern supply chain management – this course should provide you with the foundation you need to understand and apply these methods to drive supply chain value.



Success of Previous Courses

- NITIE has successfully completed 6 versions of the Global Online Certification Course on Supply Chain Digitization & Management, End-to-End Supply Chain Transformation through digitization and Business & Operations Analytics in association with **Prof. David Simchi- Levi** in 2021-22.
- The courses received an overwhelming response with 7500+ individuals from reputed national and international organizations. Some prominent academic institutions include the IITs, IIMs, IIFT, University of London, University of Warwick and some eminent organizations include P&G, HUL, GE, ITC, Amul, Deloitte, General Mills, IBM, Titan, Reliance, PwC and many more.



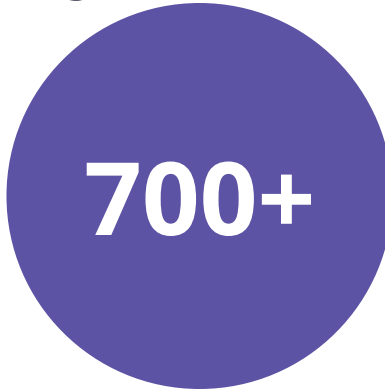
Participants



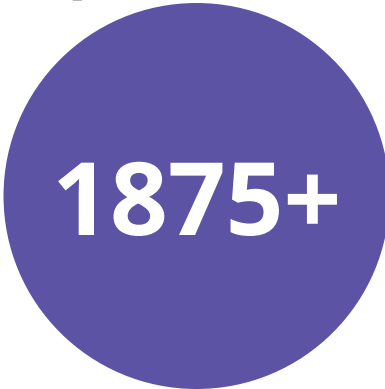
Countries



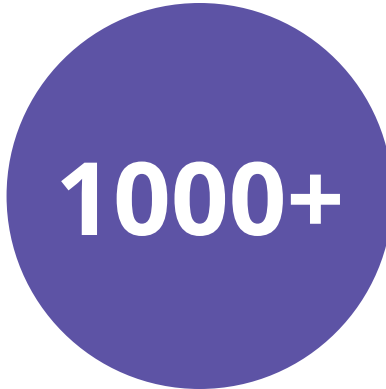
Organizations



Industry Professionals

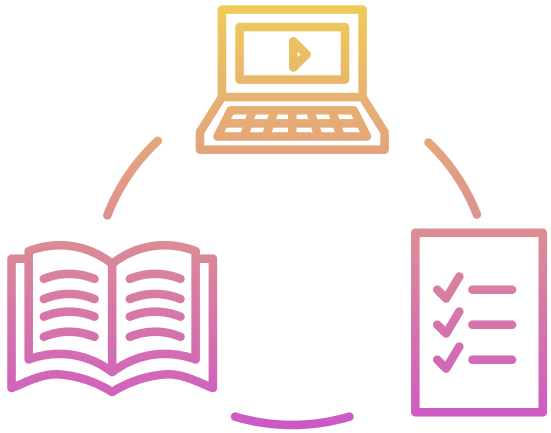


IITs & IIMs Students



List of Previous Courses

- [Supply Chain Digitization and Management](#)
- [Business and Operations Analytics 2021](#)
- [End-to-End Supply Chain Transformation through Digitization](#)
- [Business and Operations Analytics 2022](#)
- [Supply Chain & Demand Analytics](#)
- [Data-Driven Supply Chain Transformation](#)



Participated Organizations



Educational Institutes

Corporates



Course Focus and Outcomes



Focus

- Supply Chain Trends and Supply Chain Competency
- The Different Levels of Analytics: Descriptive, Diagnostics, Predictive and Prescriptive
- The Impact of Integrating Predictive and Prescriptive Analytics on Supply Chain and Business Performance
- Real World Examples on the Use of Data and Analytics to Improve Operations
- Digital Supply Chain transformation
- Supply Chain Resiliency and Key Performance Measures

Outcomes

- Develop Critical thinking about the data and the analyses
- Identify opportunities for creating value using business analytics
- Estimate the value created using business analytics to address an opportunity



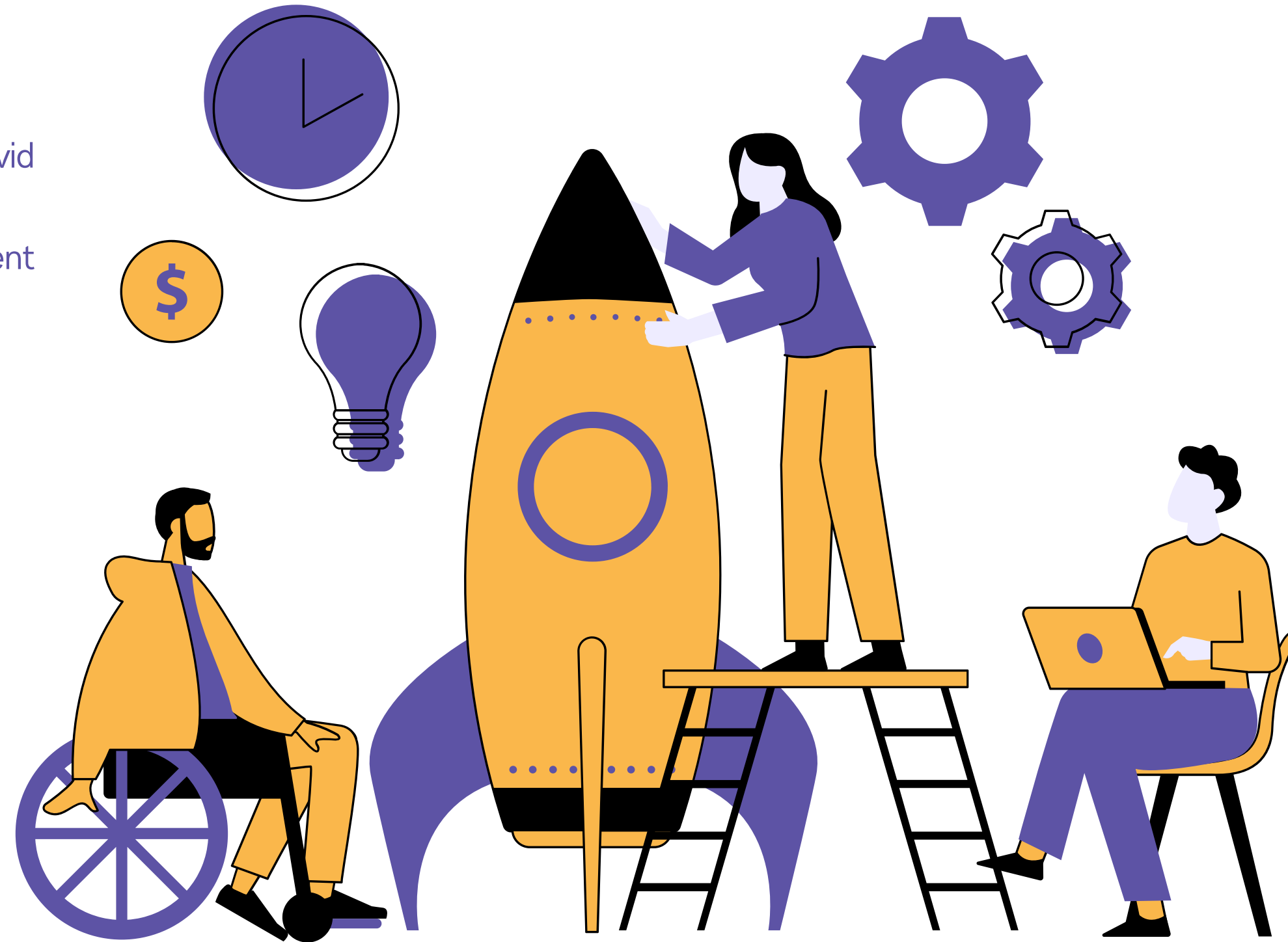
Course Highlights and Structure

Highlights

- Lecture recordings will be provided for 1 week
- Participants will get the opportunity to interact live with Prof. David Simchi-Levi
- Learn key concepts & trends through exhaustive cases & recent happenings in the industry
- Lecture slides and supplementary materials after each session

Structure

- October 29, 2022 – December 4, 2022
- 5:00 PM – 7:30 PM IST || Saturday - Sunday
- 30 Hours Course || 12 Sessions (2.5 Hours/Session)
- Mode of Instruction - Via Online Platforms
- Lecture Attendance and Quiz Submission will be the criteria for Course Completion
- Upon completion of the course, all registered participants will receive a Certificate of Completion from NITIE & BITS Pilani signed by Prof. David Simchi-Levi and the leadership team





Supply Chain Fundamentals

Oct 29-30, Week - 1



Supply Chain Digitization

Nov 12-13, Week - 3



Supply Chain Planning

Nov 26-27, Week - 5

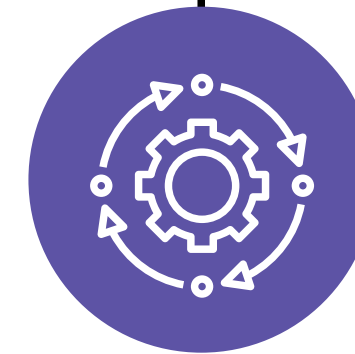


Course Timeline



Data Science and AI to Improve Business Decisions Modeling

Nov 5-6, Week - 2



Supply Chain Resiliency

Nov 19-20, Week - 4



Supply Chain Sustainability

Dec 3-4, Week - 6





Course Content

Week 1: Supply Chain Fundamentals

- Introduction and Course Overview
- Customer Value and Operations Strategy
- Controlling the Bullwhip and the Value of Information
- Supply Chain Integration
- Push-Pull Strategies
- Complexity Reduction
- Supply Chain Segmentation

Week 2: Data Science and AI to Improve Business Decisions

- Overview of Data Science and Machine Learning Techniques
- Data Science for New Business Model
- Data Science for Customized Offering
- Data Science to improve Operations





Course Content

Week 3: Supply Chain Digitization

- Big Data Analytics for reengineering business processes
- Supply Chain Digitization: Unified view of Demand, Segmentation, Smart S&OP, Smart Execution
- Creating your digital roadmap
- Prioritization Guidelines
- Transformation Roadmap
- Developing an effective solution architecture

Week 4: Supply Chain Resiliency

- The Risk Exposure Index
- Supply Chain Flexibility
- Supply Chain Redundancy
- Inventory Management Strategies





Course Content

Week 5: Supply Chain Planning

- Network Planning and Inventory Optimization
- Transportation Mode Selection
- Supply Contracts and Risk Sharing Strategies

Week 6: Supply Chain Sustainability

- Sustainable Supply Chain as a source of competitive advantage
- Optimizing Efficiency, Responsiveness and Carbon Emission trade-offs
- Short-Term and Long-Term Opportunities to Reduce Carbon Emission





About NITIE

- National Institute of Industrial Engineering (NITIE), established in 1963 by the Government of India with the assistance of United Nations Development Project (UNDP) through the International Labour Organization (ILO), is one of the leading institutes for Management education.
- NITIE, a pioneer in Industrial Management has been positioned 9th amongst management schools in India by National Institutional Ranking Framework (NIRF) in 2022.
- NITIE, widely known as the leading Institute in Supply Chain and Operations, holds a purpose in advancing the transformative education and industry inspired research in different domains thus dedicating itself to help Indian businesses to make their presence felt globally. The institute has a strong linkage with private and public sectors, national research institute, other academic institutions, universities, government organizations, and communities.
- NITIE is dedicated to help Indian businesses to make their presence felt globally. NITIE has decided to act as driving force not only in manufacturing sector but all dynamic sectors of the Indian economy. It has aligned its vision and activities in line with the current and future needs of the Indian economy and its vibrant and growing sectors.





About BITS Pilani

- Birla Institute of Technology & Science, Pilani (BITS Pilani), declared a Deemed to be University in 1964, was conferred the distinction of Institution of Eminence in 2020 by the Ministry of Education, Govt. of India. The qualities of innovation, enterprise, commitment to excellence, adherence to merit, and transparency, have characterized the Institute during its inexorable march to eminence.
- Over the span of 58 years, across its campuses, the Institute has been offering educational programmes that are academically rigorous, broad-based, modular, flexible, and relevant to the needs of industry and society, with the agility to adapt to the changing environment, at all three levels, namely, Integrated First Degree, Higher Degree and the Doctoral Degree.
- The institute has taken pioneering initiatives towards the development of institutionalized linkages with industry, through its (i) Practice school, (ii) Technology Innovation Center, and (iii) Off-campus Work Integrated Learning Programmes (WILP). Today, 18,000+ students are enrolled on the campuses, and about 22,000+ working professionals are enrolled in WILP. The unique concept of dual degree programme for On-campus students helps them to equip for careers in interdisciplinary areas.





About Prof. David Simchi-Levi

- Prof. David Simchi-Levi is the most renowned Professor and Thought Leader in the field of Supply Chain Management and also serves as the Editor-in-Chief of Management Science. He is the recipient of the prestigious INFORMS Impact Prize 2020 for his work on Supply Chain Resilience. His book, "Designing and Managing the Supply Chain" (with P. Kaminsky and E. Simchi-Levi) is a staple across B-schools for their Supply Chain Management courses.
- He is the founder and chairman of LogicTools which provides software solutions and professional services for supply chain optimization. The company has provided decision support systems to clients such as Caterpillar, ConAgra, Kraft Foods, Mercer Management, Ryder, SC Johnson, UPS, U.S. Postal Service, Walgreens, etc. and was acquired by IBM.
- Prof. David Simchi-Levi had associated with NITIE for the Global Online Certification Courses on Supply Chain Digitization and Management as well as Business & Operations Analytics, which were highly successful courses with over 2500 participants from all over the world in each course.
- Profile on MIT website - https://cee.mit.edu/people_individual/david-simchi-levi/
- LinkedIn Profile - <https://www.linkedin.com/in/david-simchi-levi-3045026/>



Prof. David Simchi-Levi

Massachusetts Institute of Technology, USA



About Prof. Souvik Bhattacharyya

- Prof. Souvik Bhattacharyya is the Vice Chancellor of BITS Pilani since 2016. Following a post-doctoral research stint at Texas A&M, he joined IIT Kharagpur in 1991 as a faculty member where he has been a Professor (2003-21), Dean (2009-12) and Deputy Director (2013-16). He also served as the Vice-Chancellor of Jadavpur University, Kolkata and held faculty position at University of Canterbury, Christchurch, New Zealand during 1998-2000. He has published over 250 research articles, is a co-author of the Heat Transfer text with J P Holman (McGraw Hill) and adaptation author of Thermodynamics by Borgnakke and Sonntag (Wiley India).
- Prof Bhattacharyya has been a member of the Editorial Boards of several reputed international journals. He is currently a member of the Expert Advisory Committee (EAC) of DST Advanced Manufacturing Technologies (AMT) Program and IIT Jodhpur Senate. He has been the Chairperson of the SERB TARE Expert Committee and SERB TARE Screening Committee, member of SERB Civil & Mechanical PAC, DST Fast-Track Committee, Research Council of CSIR-CGCRI, and IISc Bangalore Court.
- Prof Bhattacharyya is a Co-Chair of the FICCI Higher Education Committee and the Member-at-large of the Executive Council, Shastri Indo-Canadian Institute (SICI).
- Profile website - <https://www.bits-pilani.ac.in/university/SouvikBhattacharyya/profile>



Prof. Souvik Bhattacharyya

BITS Pilani



About Prof. Manoj K. Tiwari

- Prof. Manoj K Tiwari, Director-NITIE, is on-lien from his post as Professor, Department of Industrial and Systems Engineering at Indian Institute of Technology, Kharagpur.
- He has been ranked 1 among top 100 individual researchers across the world who had published research articles in International Journal of Production Research (1985-2010), the top leading author for Supply Chain Analytical Techniques (Computer & Industrial Engineering), among Top 20 most productive authors in the area of Production and Operations Management in the last 50 years (Int. Journal of Production Economics, 2009) and rated 2nd among many researchers working in Logistics and Supply Chain Management in India (Analysis of the logistics Research in India-White paper published in TU Dortmund University, Dortmund Germany-2012).
- He is the recipient of “Most Influential Researcher Award” in the domain of Operations and Supply Chain Management.
- Optimization, Simulation and Computational Intelligence are the main techniques adopted by Prof. Tiwari to automate the decision support system for complex and large-scale problems in Manufacturing and Logistics System.
- Profile on NITIE Website - <https://www.nitie.ac.in/about-director>
- LinkedIn Profile - <https://www.linkedin.com/in/manoj-tiwari-5050a634/>



Prof. Manoj K. Tiwari

NITIE Mumbai



About Prof. Sudhirkumar Barai

- Prof. Sudhirkumar Barai is a Director and Senior Professor of Civil Engineering at BITS Pilani-Pilani campus, Rajasthan. He is also a Professor in the Department of Civil Engineering, Indian Institute of Technology, Kharagpur, India availing lien for the current position.
- In 1995, he obtained Ph.D (Eng.) from Indian Institute of Science, Bangalore, India. He received the degrees of B.E.(Civil) and M.E.(Civil) with specialization in Structural Engineering in 1987 and 1989, respectively, from the Faculty of Engineering, MS University of Baroda, Baroda, India.
- His research interests are: Concrete Technology, Structural Health Monitoring, Computational Intelligence in Engineering. He has published more than 240+ papers in leading international journals and conferences in his research fields. He has co-authored three books- (1) Concrete Fracture Models and Applications (2) Shear Strengthening of T-beam with GFRP: A Systematic Approach and (3) Systematic Approach of Characterisation and Behaviour of Recycled Aggregate Concrete, which have been published by Springer. He has also co-edited two books - (1) Advances in Sustainable Construction Materials and Geotechnical Engineering and (2) Stability and Failure of High-Performance Composite Structures, published by Springer.
- Profile on BITS website - <https://www.bits-pilani.ac.in/pilani/skbarai/Profile>



Prof. Sudhirkumar Barai

BITS Pilani

Course Fees

For Individual Registrations:

Category	Fee Category	Registration Fee (incl. of all)*	Register here
Participants from India	Student	INR 4,000/- per participant	<u>Register</u>
Participants from India	Academician / Faculty	INR 7,000/- per participant	<u>Register</u>
Participants from India	NITIE / BITS Pilani Alumni	INR 8,000/- per participant	<u>Register</u>
Participants from India	Industry Professionals / Others	INR 14,000/- per participant	<u>Register</u>
Foreign Participants	Any	USD 200/- per participant	<u>Register</u>

**Convenience fees may apply*

Course Fees

For Bulk Registrations from one organization:

Category	Number of Participants	Registration Fee (incl. of all)*
Students	11 - 25	INR 3,500/- per participant
Students	26 - 50	INR 3,000/- per participant
Students	51 and above	INR 2,500/- per participant

Please write an e-mail to goc@nitie.ac.in for more details on bulk registration.

**Convenience fees may apply*

Course Fees

For Bulk Registrations from one organization:

Category	Number of Participants	Registration Fee (incl. of all)*
Industry Professionals	5 - 10**	INR 14,000/- per participant
Industry Professionals	11 - 25	INR 12,500/- per participant
Industry Professionals	26 - 50	INR 11,000/- per participant
Industry Professionals	51 and above	INR 9,000/- per participant

Please write an e-mail to goc@nitie.ac.in for more details on bulk registration.

*Convenience fees may apply

** For registrations of less than 5 persons from one organization, direct individual payments should be made



Coordinating Team

[Click here for FAQs.](#)

For all queries, please E-mail to: goc@nitie.ac.in

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[Prof. Rofin T M](#)



[Prof. Maheswar S. Mahapatra](#)



[Prof. Manupati Vijaya Kumar](#)



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[Prof. Satyendra Kr. Sharma](#)

















Coordinating Team













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