

Emerging Issues and Trends to Risk Management (Online Form)

Overview

Architects, engineers, and contractors are confronted with copious information when it comes to decision-making. The information emerged from various sources such as authorities like government, ministry, manufacturing board, top management, and stakeholders to even internal changes like variation orders, logistics, staff mobilization, and cash flows, to name only some of the obvious sources. This information, often referred to as risks, is pushing the manufacturing players toward risk management in decision-making.

This abundance of risks presents both opportunities and threats for manufacturing players. While sources of risks are growing, the number of individuals with the analytical skills to probe and understand the vast information is deemed insufficient. Knowledge of mathematics, statistics, theory, intuition, and experience of a situational context are some of the variables required for systematic and scientific risk analysis.

Risk management is a systematic approach to first identify the risks present in a situation, which in this context, is a particular manufacturing project. The risks are sorted into categories to facilitate analysis and management. There is undoubtedly difficulty in managing risks, especially in a manufacturing project, the risks are often unique and may occur for the very first time. However, it is good to start and practice risk management with good documentation, the accumulated knowledge from practice and various publications builds familiarity with a particular context and serves as learning to be shared.

Risk analysis either quantitative or qualitative methods is a vital part of risk management. It analyses identified risks according to the categories and then sets priority and urgency ranking to attend to them. Quantitative risk analysis is perhaps the most widely adopted for it provides a better understanding of data patterns in figures and numbers calculated in just simple spreadsheet, making the process efficient and cost-effective, in both time and money. Qualitative risk analysis is catching up with the trend with numerous complex analyses using linguistic variables, especially when understanding risks involves experience and intuition.

The approach of this course is based on the lecturers' many years of conducting research and teaching, as well as the desire to communicate the fundamentals of risk management to manufacturing practitioners. To accomplish this goal, we have introduced the basic definition of risks and various classifications of risks. We also introduced the types of risk analysis or assessment tools available, both quantitative and qualitative. We also present cases pertaining to the international industry context where it involves more complexity than that of the domestic industry. The cases are drawn from actual international projects handled by contractors and consultants; the case studies delineate how each and every risk is being managed. We believe this course is general enough to be

understood by many first-timers in modern risk management.

Modules	<ul style="list-style-type: none"> • Certainty, uncertainty, and risk • Risk registration and classification • Managing risk in International manufacturing projects • Economic Value Added (EVA) monitoring to reduce risks • Managing risks from National Green Tribunal (NGT) perspective • Future perspectives on managing risks in manufacturing projects • Risks in the manufacturing sector • Managing occupational health risks • Multiple Attribute Decision-Making (MADM) methods in risk management • Problem-solving sessions using real projects
Who Should Attend	<ul style="list-style-type: none"> • Faculty from academic institutions and technical institutions; Students at all levels (BTech/MSc/MTech/PhD); Engineer and/or Researcher from industry, government, and industrial R&D laboratories
Fee	<p>The participation fees (including GST) for taking the course are as follows:</p> <p>Participants from abroad: USD 100 Industry/Research Organizations/Academic Institutions: INR 2000 Research scholars/Students: INR 1000</p>
Selection and Mode of Payment	<p>Selected candidates will be intimated through e-mail and will be shared accounts detailed later on by e-mail. Last date to apply for this course is 31.12.2022. Candidates who registered early will be given preference in short listing process.</p>
How to Register?	<p>Step-1: One-time Web (Portal) Registration: Visit GIAN Website at the link: http://www.gian.iitkqp.ac.in/GREGN/index</p> <p>Create login User ID and Password.</p> <ul style="list-style-type: none"> • Fill up the blank registration form and do web registration by paying Rs 500/- online through Net Banking / Debit / Credit card. This provides him/her with life time registration to enroll in any number of the GIAN courses offered in future. <p>Step-2: Course Registration (Through GIAN Portal)</p> <ul style="list-style-type: none"> • Log in to the GIAN portal with the user ID and Password created. • Click on “Course Registration” option given at the top of the registration form • Select the Course titled "Emerging Issues and Trends to Risk Management” from the list and click on 'Save' option. • Confirm your registration by Clicking on 'Confirm Course'. <p>Step-3: Information to Short-listed Candidates</p> <ul style="list-style-type: none"> • The registered participants on GIAN portal will be informed by the Program Coordinator through E-mail regarding their shortlisting/selection for the program. • The shortlisted candidates are then required to pay the applicable Registration fee. For any queries regarding the course, please contact Dr. Harwinder Singh Professor, Department of ME & PE, Guru Nanak Dev Engg. College, Gill Road, Gill Park, Ludhiana Phone: Mob - 9815188044, E-mail : harwin75@gndec.ac.in or ip.nitj@gmail.com
Course Dates	13 th -17 th January 2023

The Faculty



Dr. Chen Wang MIEEE, MRICS, MIETI, MCRIOCM is a Distinguished Professor in Huaqiao University, Xiamen, China. He served as a senior engineer of China State Construction Engineering Corporation (CSCEC), which is the main contractor of the 2008 Olympics Beijing National Aquatics Center known as "Water Cube" and the Russian Federal Building in Moscow. His expertise includes Modern Construction Machinery and Equipment, Building Automation & Robotics, System Dynamics, Mathematics Modeling for Civil Engineering, Swarm Intelligence, Ant Colony Optimization (ACO), Fuzzy-QFD etc. supported by his vast publications. He is an IEEE professional member (U.S.), RICS member (U.K.), International Engineering and Technology Institute (IETI) Senior Member, and a perpetual member of The Chinese Research Institute of Construction Management (CRIOCM), Hong Kong (International). He was awarded as Talent Prospect Icon in 2014 by the Ministry of Higher Education.



Dr. Harwinder Singh is currently working as a Professor in the Mechanical and Production Engineering Department at Guru Nanak Dev Engineering College Ludhiana, Punjab, India. He has published more than 225 research papers in various reputed national and international journals and conferences. He has coordinated eight research projects of worth Rs. One crore. He has been in Editorial Board Member of various International Journals: International Journal of Data Science (Inder Science Publishers) from 2014 onwards, International Journal of Semantic and Infrastructure Services from 2018 onwards. He has been conferred with many awards: Best Engineering College Teacher Award of Punjab State in year 2013 by ISTE, New Delhi; Dr. R L Aggarwal Award from Punjab Academy of Sciences in year 2017; UGC Research Award for the Year 2014-16, AICTE VBTA 2021 and many more.



Dr. Amandeep Singh is currently working as a Postdoctoral Researcher in the System Design Engineering Department at the University of Waterloo, Waterloo, Ontario, Canada. He did his Ph.D. in the area of Human Factors Engineering from Dr. BR Ambedkar National Institution of Technology Jalandhar, Punjab, India. His research interest includes Automotive Human Factors, Ergonomics in Agriculture, Biodynamic responses to Vibration, Seating Dynamics, Ageing, and Postural Comfort, mainly. He has been awarded research purpose grants from the Council of Scientific and Industrial Research (CSIR); Science and Engineering Research Board (SERB), Department of Science and Technology; Institution of Engineers (IEI). He is a professional member of the Institution of Engineers (IEI), Kolkata, Indian Institution of Industrial Engineering (IIIE), Mumbai; and the Association of Canadian Ergonomists (ACE), Canada.