INFRASTRUCTURE PLANNING AND MANagements

CIVIL ENGINEERING

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TYPE OF COURSE : New | Elective | UG/PG
INTENDED AUDIENCE : B.E./M.E./M.S./MBA/PhD
COURSE DURATION : 12 weeks (28 Jan’19 - 19 Apr’19)
EXAM DATE : 27 April 2019

INDUSTRIES APPLICABLE TO : L&T IDPL, PwC, Deloitte, Quasi-Government Bodies such as TWIC, TNUIFSL etc

COURSE OUTLINE :
This course attempts to introduce students to ‘real world’ risks and challenges in managing infrastructure. After a brief introduction to the infrastructure planning process as well as the state of infrastructure across sectors in India, we systematically look at various risks that plague infrastructure projects. We then look at a variety of novel solutions or fixes that can help us execute infrastructure projects better. The course is replete with real-world case studies and guest lectures to ensure that what is being discussed is practically applicable.

ABOUT INSTRUCTOR :
Dr. Ashwin Mahalingam joined the faculty in the Building Technology and Construction Management division of the Civil engineering department at IIT-Madras in 2006. Ashwin received his B.Tech in Civil engineering from IIT-Madras and then proceeded to Stanford University for a Masters in Construction Engineering and Management. He then helped start up an internet based company in the USA called All Star Fleet, aimed at providing asset management services for construction companies. Following this he returned to Stanford University to pursue a PhD in the area of Infrastructure Project Management. Ashwin’s research interests are in the areas of Public Private Partnerships (PPP) in Infrastructure, the management and governance of large engineering projects and the use of digital technologies in construction. Ashwin’s current research focuses on institutional strengthening and post-award governance of PPP projects in India.

COURSE PLAN :
Week 01 : Class Introduction, Introduction to Infrastructure and to the Transportation, power and telecom sectors
Week 02 : Rural and Urban Infrastructure Sectors, Players and Phases in an Infrastructure Project
Week 03 : Project Finance and Public Private Partnerships
Week 04 : Construction and Economic Risks
Week 05 : Political and Social Risks
Week 06 : Stakeholder Management, Design Thinking and Negotiations
Week 07 : Socio-Economic Analysis and Good Governance for Infrastructure
Week 08 : Modeling Flexible Project Arrangements
Week 09 : Tales from the Field: Guest Lectures from Infrastructure Practitioners
Week 10 : Case Studies
Week 11 : Incomplete Design and Course Wrap-up
Week 12 : Exam