Course: Introduction to Multimodal Urban Transportation Systems (MUTS)

Course Code:noc20-ce53

Session: 2019-20

Duration: 12 Weeks

Assessment procedures: Weekly Assignment (25%) + proctored certification Exam (75%)

Curriculum of the Course:

Week 1:

- Overview of urban transportation: Urbanization and Transport
- Overview of urban transportation: Key issues in urban transport
- Overview of urban transportation: Challenges in urban transportation
- Overview of urban transportation: Travel and demand model overview
- Overview of urban transportation: Vehicular level of service (LOS) overview

Week 2:

- Public transportation: Introduction to Public transportation
- Public transportation: Basic operating element of Public transportation
- Public transportation: Bus Transportation

Week 3:

- Public transportation: Financing Public transportation
- Public transportation: Transit Marketing
- Public transportation: Rail transportation
- Public transportation: Intermediate Public Transportation
- Public transportation: Measuring performance of transit systems

Week 4:

- Public transportation: Advance operation concept of public transportation
- Public transportation: Bus and Rail transit capacity
- Public transportation: Station capacity
- Public transportation: Transit Stop location

Week 5:

- Non-motorised Transportation (NMT) planning: Introduction to NMT systems
- Non-motorised Transportation (NMT) planning: Assessing existing NMT scenario
- Non-motorised Transportation (NMT) planning: Data collection and analysis in NMT planning
- Non-motorised Transportation (NMT) planning: Complementary selection of Interventions

- Non-motorised Transportation (NMT) planning: Alternative selection through economic and financial analysis

Week 6:

- Non-motorised Transportation (NMT) planning: Basic NMT characteristics
- Non-motorised Transportation (NMT) planning: Pedestrian Data collection and flow characteristics
- Non-motorised Transportation (NMT) planning: Pedestrian flow models
- Non-motorised Transportation (NMT) planning: Pedestrian flow characteristics on facilities
- Non-motorised Transportation (NMT) planning: Pedestrian level of service (PLOS) based on flow models

Week 7:

- Non-motorised Transportation (NMT) planning: Other types of pedestrian level of service (PLOS)
- Non-motorised Transportation (NMT) planning: HCM 2010 methodology for PLOS
- Non-motorised Transportation (NMT): Bicycle service and level of service (BLOS)
- Non-motorised Transportation (NMT): BLOS and Bicycle compatibility index (BCI)

Week 8:

- Non-motorised Transportation (NMT) planning: NMT Design Principles
- Non-motorised Transportation (NMT) planning: Design of pedestrian infrastructure
- Non-motorised Transportation (NMT) planning: Design of cycling infrastructure

Week 9:

- Urban Transport &Sustainability: Travel Demand management (TDM) overview
- Urban Transport &Sustainability: Push measure cases
- Urban Transport &Sustainability: Pull measure cases
- Urban Transport &Sustainability: Parking Studies
- Urban Transport &Sustainability: Transit Oriented Development

Week 10:

- Urban Transport &Sustainability: Introduction to Intelligent Transport Systems (ITS)
- Urban Transport &Sustainability: ITS components, applications and communication
- Urban Transport &Sustainability: ITS Architecture
- Urban Transport &Sustainability: Electronic toll collection
- Urban Transport &Sustainability: Public bicycle sharing (PBS) system with ITS

Week 11:

- Urban Transport &Sustainability: Multimodal Transport (MMT) environment
- Urban Transport &Sustainability: Multimodal Level of Service (MMLOS)
- Urban Transport &Sustainability: Design of multimodal transfer facilities
- Urban Transport &Sustainability: Park and ride (P&R) facility planning

Week 12:

- Urban Transport &Sustainability: An introduction to Pedestrian road safety and associated risk factors
- Urban Transport &Sustainability: Road crash estimation and elements of predictive methods
- Urban Transport &Sustainability: Predicting vehicle-pedestrian and vehicle-bicycle conflicts
- Urban Transport &Sustainability: Sustainable strategies for Urban Transportation

Enrolled Students

1	Aarif Majeed
2	Akash Kumar Jorwal
3	Aniruddh Dubey
4	Ankit Krishniya
5	Apoorva Dwivedi
6	Ayush Kumar
7	Bhaarat Vaishnav
8	Nikhil Bhan Verma
9	Dewang Saraswat
10	Divyanshu Aditya Peepliwal
11	Deepak Maholiya
12	Pulkit Sharma
13	Himanshu Grag
14	Jitesh Saini
15	Rohit Meena
16	Shyam Sharma
17	Vimal Kumawat
18	Manish Dayama
19	Pooja Kumari Meena
20	Mohit Meena
21	Mukul Thurwal
22	Parth Choudhary

23	Piyush Pashupati Pandey
24	Mansi Dhaked
25	Ravikantsahu
26	Ritesh Kumar Maurya
27	Rohit Mehta
28	Surendra Pratap Singh
29	Sahi Ram Godara
30	Jayesh Saini
31	Reddy Sai Praveen Reddy
32	Samyak Jain
33	Chitransh Srivastava
34	Shahdab Khan
35	Shrvan Choudhary
36	Sonal
37	Sagar Soni
38	Surendra Kumar
39	Sandeep Verma
40	Tanmay Jaiswal
41	Tarun Kumawat
42	Vikas Aechara
43	Vipul Vikram Mathur