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SMARTCITY
Innovative Approach Towards a Master
Program on Smart Cities Technologies

Mongolian University of Science and Technology
Curriculum development and Registration office

COURSE SYLLABUS			
Course Title	Fundamental of Smart City		
Course Code		**No. of Credits**	3
Department		**School**	MUST
Pre-requisites Course Code	none	**Co-requisites Course Code**	
Course coordinator	G.Zorig	**Room number**	
Email	gzorig@gmail.com	**Telephone No.**	
Other Instructor(s)			
Learning Hours	Total: . . . Learning hours (2:1:1:5) Lecture (. . hr), Seminar (. . hr), Field trip(. . hr), (. . hr)		
Course Type	☑ Compulsory ☐Elective ☐Selected elective ☐Other		
Offer in Academic Year	☐1st Semester ☑2nd Semester ☐Summer ☐Year Long		
Introduction language	Mongolian or English		

AIMS AND OBJECTIVES:

- Prepare the professionals on Smarts City project management
- Practical knowledge of Hardware Infrastructure of Smarts City
- Design and Planning skills of Future City

ESSENTIAL READINGS: (Journals, textbooks, website addresses etc.)

BIBLIOGRAPHY:

- M.Barlow and C. Levy-Bencheton. Smart Cities, Smart Future: Showcasing Tomorrow

- Townsend Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia

- Gassmann, J.Böhm Smart Cities: Introducing Digital Innovation to Cities
- Smart Ulaanbaatar Program

COURSE DESCRIPTION:

The purpose of this course is to provide a deep understanding of the digital technologies, infrastructure, and social political forces shaping the future of our urban environments. We begin by defining Smart Cites through lectures and case studies and drill down into the technologies shaping new and existing cities.

TEACHING METHODS: Flipped classroom and problem-based learning (Blended learning)

COURSE CONTENT

Course topics for lecture and seminar:	Lecturehours	Seminar hours
Concept of smart city	2	
Main components of Smart City	2	
Smart Governance	2	
Smart Economy	2	
Smart People	2	
Smart Services	2	
Smart Infrastructure	2	
Smart Living	2	
Soft and Hard Infrastructure of Smart City	2	
City Wide Network	2	
Wireless Networks	2	
IoT and Smart City	2	
E-Government and Smart City	2	
Smart Services	2	

COURSE LEARNING OUTCOMES (CLOs)	Aligned PLOs
By the end of the main course, the students should be able to:	
1. Basic understanding of Smart City concepts	
2. Detailed knowledge of each components of Smart City	
3. Learn about the basics of Soft and Hard Infrastructure of Smart City	
4. Learn the management basics of Smart City projects	
5. Planning the Smart City service design	
6. Basic design ability of Internet of Thing and Cloud Data Center	

7.	Skill to Develop Smart City Program	

By the end of the field trip course, the students should be able to:

8.	Practical understanding of Smart City Infrastructure	
9.	Learn about Organizational Structure of Smart City management in City	

COURSE TEACHING AND LEARNING ACTIVITIES

Weekly contact hours:(.....)-…..hour lecture, 1x1 hour seminar, Field trip …..hour laboratory.
Traditional and active learning methods will be used within lecture, seminar and field trip classes.

Learning methods /Pedagogy/	Modes of Delivery	Aligned CLOs
➢ Case based learning	✓ Lecture	
➢ Flipped classroom	✓ Seminar and discussion	
➢ Experiential learning	✓ Team and individual team work	

COURSE ASSESSMENT METHODS

Assessment tools	Assessment frequency	Weight	AlignedCLOs
Attendance/Participation in class	Weekly	10%	
Homework/assignment	6, 7,8,9,10,11,12,13th weeks	20%	
Case processing/ Course work/project	13 th weeks	20%	
Midterm exam	7, 14	20%	
Final exam	17 or 18th week	30%	

REVISED BY:

Course coordinator:	G.Zorig	Date	01/08/2020