SE 315   Map Projections

Credit and Contact hours	[3] ; 2 (Lectures), 1 (Tutorials), 2 (Laboratory)
Required, or Elective	Required for a BSCE degree
Course Description	General theory of map projection; study of some famous map projections (Cylindrical; Conical and Azimuthal); map projections applied in KSA; map projections applications.
Prerequisites or Co-requisites	SE 314
Course Learning Outcomes	Students completing this course successfully will be able to

Course Learning Outcomes	Related Student Outcomes (SO)
CLO1. Explain the process of representations of a curved earth on a flat map surface.	**SO1**
CLO2. Select an appropriate map projection in map design process	**SO1**
CLO3. Develop map using analysis skills	**SO7**

Student Outcomes	SO1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics, and using modern engineering tools [ABET 1]. SO 7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Topics Covered		
	List of Topics	**Related CLOs**
	Introduction	*CLO1*
	General theory of map projection	*CLO1*
	Cylindrical projections	*CLO2*
	Conical projections	*CLO2*
	Azimuthal projections	*CLO2*
	Map projections applied in KSA	*CLO2*
	Applications	*CLO3*

Textbook(s) and Other Required Material	Textbook: Map Projections: A Reference Manual L M Bugayevskiy, John Snyder, 4th edition, 1995
Grading System	Tutorials problems and attendance 10% 2 Field work reports 20% 2 Mid-Terms 30% Final Exam 40%
Instructors	Prof. Hasan M Bilani; email: hbilani@ksu.edu.sa
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