

Universidad de Puerto Rico  
Colegio de Agricultura y Artes Mecánicas  
SENADO ACADEMICO  
Mayagüez, Puerto Rico

Certificación Núm. 68-16

Yo, Gloria A. Viscasillas, Secretaria del Senado Académico del Recinto Universitario de Mayagüez de la Universidad de Puerto Rico,  
CERTIFICO

Que en reunión ordinaria celebrada el martes 22 de octubre de 1968 este organismo aprobó para su inclusión en el Catálogo los siguientes cursos:

Departamento de Ingeniería Civil

CI EG 556. PHOTO INTERPRETATION. Three credit hours. One lecture and two two hours periods of discussion or laboratory each week. Prerequisite: Consent Department Chairman.

Analysis and interpretation of patterns in aerial photographs to determine soil and bedrock types, drainage properties and other necessary factors for engineering works; drainage; erosion; tone and vegetation; landforms; water laid materials; windlaid materials; rocks; tropical soils.

CI EG 561. APPLIED HYDRAULICS. Three credit hours. Three lectures per week. Prerequisite: Ge Eg 463.

Dimensional analysis and modelling; hydraulic measurements; hydraulic machinery and structures; steady conduit and open channel flow; pipe network system.

CI EG 563. ELEMENTS OF OCEAN ENGINEERING. Three credit hours. Three one hour lecture each week. Prerequisites: Ge Eg 463 and Consent Department Chairman.

Fundamentals of wave theory; waves of small amplitude, shallow water theory. Standing and progressing waves. The solitary wave. Shoaling. Wave refraction. Basics of beach erosion sediment motion and sorting. The beach profile, Wave energy and littoral transport. Forces on hydraulic structures; wave forces on a wall and on piles. Design of breakwaters.

CI EG 566. AIR POLLUTION CONTROL. Three credit hours. Two one-hour lecture and one two-hour laboratory periods per week. Prerequisite: CiEg 521 or consent of Department Chairman.

Classification and extent of air pollution problems. Meteorology and air pollution; dispersion from effluents. The effect of air pollution on plants and animals; visibility problems; socio-economic impact of pollution problems; sampling procedures; analytical and experimental methods; equipment and processes for abating air pollution. Air pollution control by legislation.

CI EG 567. WATER TREATMENT AND POLLUTION CONTROL. Three credit hours. Two one-hour lectures and one three-hour laboratory period per week. Prerequisite: Ci Eg 521.

Study of water and wastewater treatment processes in terms of the underlying physical, chemical, and biological principles. The application of the principles to the study of unit treatment processes and to the design, operation, and to the analysis of performance of integrated treatment plants. The influence of the self purification of natural bodies of water and of the planned use of the resource on the type and degree of treatment of the waste and its disposal. Wastewater reclamation.

CI EG 568. WATERWORKS AND SEWERAGE DESIGN. Three credit hours. Three one-hour lecture-discussion periods per week. Prerequisite: Ci Eg 522.

Design of water transmission and distribution systems. Design of wastewater and storm drainage systems. Waterworks machinery and equipment. Engineering projects and construction.

CI EG 571. MATRIX ANALYSIS OF STRUCTURES. Three credit hours. Three one-hour lectures per week. Prerequisites: Ci Eg 440 and consent Department Chairman.

Use of matrix methods in the analysis of structure; flexibility and stiffness methods.

CI EG 576. PRINCIPLES OF PLANNING. Three credit hours. Three lecture-discussions per week. Prerequisite: Consent Department Chairman.

The scope of planning, legislative bases for planning; organization of planning agencies; basic studies for planning, public utilities and related service facilities, transit and transportation systems, recreation and public spaces, land use planning, zoning, land sub-division regulations, economic and social aspects of planning, local, regional and national levels of planning.

CI EG 578. TRANSPORTATION. Three credit hours. Three lecture-discussions per week. Prerequisite: Consent Department Chairman.

History of road and transportation development. Highway classification, highway agencies and organizations; sea, air, and surface transportation facilities; mass transit; parking, traffic studies; socio-economic studies related to transportation; land use inventories; laws and regulations; effective planning and programming, latest advances in the transportation field.

CI EG 591. PROJECT CONTROL AND MANAGEMENT. Three credit hours. Three one-hour lecture each week. Prerequisite: Consent Department Chairman.


Procedures involved in the economic aspects of Civil Engineering projects with emphasis on the fundamental factors that control the cost of heavy construction; contract practices; scheduling methods; economic analysis and control; field organization and job management; case studies of highway and heavy construct projects.

Departamento de Ingeniería Química

CH EG 570. COMPREHENSIVE PROJECTS IN CHEMICAL ENGINEERING. Two credit hours. Six hours of laboratory work per week. Prerequisite: Ch Eg 554.

Projects in chemical engineering requiring the integration of previously learned principles in the field.

Y para que así conste, expido y remito a las autoridades universitarias correspondientes la presente certificación en Mayagüez, Puerto Rico, a 23 de octubre de 1968.

  
Gloria A. Viscasillas  
Secretaria