Common Course Outline

SURV 236

Minor Engineering II – Sediment Control and Hydrology

3 **Credits**

Community College of Baltimore County

Description

SURV 236 – Minor Engineering II – Sediment Control and Hydrology presents principles and requirements behind sediment control and hydrology; covers basic hydraulic theory, including properties, kinematics and dynamics of liquid flow in open channel pipes; rainfall; runoff; erosion and erosion control methods; sediment basins; and detention basins.

3 Credits

Prerequisites: SURV 101 or permission of the program coordinator.

Overall Course Objectives

Upon completion of this course students will be able to:

1. discuss basic hydrology principles;
2. Use the TR-55 program to calculate data values;
3. Discuss and calculate RCN-Runoff-Time of Concentration (existing and ultimate);
4. Interpret storm hydrographs;
5. Calculate peak discharges using tables and graphs;
6. Interpret stage, storage, and discharge tables;
7. Interpret discharge hydrographs;
8. Discuss basic stormwater management principles and concepts;
9. Use the TR-20 program to calculate data values; and
10. Discuss sediment control practices and design concepts using Maryland Department of the Environment (MDE) standards and specifications.

Major Topics

I. Basic Hydrology Concepts
II. TR-55 Program
III. TR-20 Program
IV. RCN-Runoff-Time of Concentration (existing and ultimate
V. Storm Hydrographs
VI. Stage, Storage, and Discharge Tables
VII. Discharge Hydrographs
VIII. Stormwater Management Principles and Concepts
IX. Sediment Control Practices and Design Concepts

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

1. Quizzes, tests, exams: Individual instructors will notify students of procedures, but as a minimum, two tests or weekly quizzes will be required.
2. Comprehensive midterm exam.
3. Comprehensive final exam.
4. Homework assignments: Individual instructors will notify students of procedures, but as a minimum one graded assignment will be given.

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is a core course in the Survey Technology AAS and Certificate programs.

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