

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

_____ Transfer Course X A.A. Degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: PWM 51 Road Construction & Maintenance

UNIT VALUE: 3

MINIMUM NUMBER OF SEMESTER HOURS: 48

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills.

ENTRANCE REQUIREMENTS

PREREQUISITE: None.

COREQUISITE: None.

RECOMMENDED PREPARATION: None.

SCOPE OF COURSE:

Provides instruction on street construction and maintenance; including materials and methods, specifications, records and cost accounting systems, revenue sources and budget preparation. Other subjects include safety, drainage, equipment records and specifications, as well as public relations. Codes and industry standards that pertain to improvements and repair will be reviewed.

SPECIFIC COURSE OBJECTIVES:

Successful students will be able to:

1. Identify the project development steps of a street or highway construction project.
2. Explain roadway construction standards including specifications.
3. Identify and evaluate materials used for roadway construction including equipment used in placement.
4. Explain the role and authority of a public works inspector, project manager and engineer as it pertains to roadway construction and maintenance projects.
5. Identify and analyze the environmental issues impacting roadway construction and maintenance projects.
6. Identify and explain the use of standard plan symbols and abbreviations.
7. Identify safety practices as they pertain to roadway construction and maintenance.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Project Development Steps
 - A. Determination of project scope
 - B. Conceptual design
 - C. Project cost estimating
 - D. Actual project design
 - E. Project review
 - F. Finalizing specifications
 - G. Developing bid packages
 - H. Evaluating bids
 - I. Contractor selection
 - J. Pre-construction considerations
 - K. Construction schedules
 - L. Change orders
 - M. Project completion

- II. Understanding Standard Plans
 - A. Green book
 - B. Agency standards
 - C. County standards

- III. Materials
 - A. Asphalt
 - B. Concrete
 - C. Equipment

- IV. Responsibilities, Duties and Roles of
 - A. Project engineer
 - B. Project manager
 - C. Inspector

- V. Environmental Issues and Permits
 - A. Air quality
 - B. NPDES
 - C. Resource permits

- VI. Plan Reading
 - A. Symbols
 - B. Abbreviations

- VII. Safety Requirements
 - A. Traffic
 - B. Pedestrians
 - C. Employee safety

REQUIRED READING:

Birch Jr., Silas, Lynn D. Nicholson and Ron Price. Public Works Inspectors' Manual. 6th edition, 2000.

"Greenbook" Standard Specifications for Public Works Construction with Specific Regional Supplemental Amendments. 2000 edition.

Other material will be assigned from technical journals, prepared handouts, and websites

SUGGESTED READING:

The instructor will provide various supplemental reading handouts.

REQUIRED WRITING:

Students will be required to submit a class project consisting of basic drawings and basic technical writing.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.

Course may include one or more field exercises.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

DISTANCE LEARNING:

This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply:

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students): Quizzes and a final exam will be administered.

The course grading policy will be determined by individual instructors and may include the following:

- Exams
- Quizzes
- Research projects
- Writing assignments
- Classroom presentations
- Research papers
- Lab assignments
- Journal writing
- Classroom participation & discussion
- Homework

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes ___ No X Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

CONTACT PERSON: Director, Occupational and Noncredit Programs, Ext. 2286

SIGNATURES ON FILE
