



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Materials and Methods for Engineering Technology

Course Prefix and Number - ENGT2304

Department - Engineering Design

Division - Technology and Business

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours #
3:3:_____

Equated Pay hours for course - 3

Course Catalog Description - A continuation of the study of the nature, origin and properties of building materials, methods, and equipment for their integrated use in completing construction projects. A study of selecting and specifying materials with consideration for economy, quality and performance in the construction of modern buildings.

List Lab/ Other Hours
Lab Hours
Clinical Hours
Practicum Hours
Other (list)

Prerequisites/Co requisites - CNST1361

Approvals – the contents of this document have been reviewed and are found to be accurate.

Prepared by Jo Ann Lurker	Signature JALurker	Date 11-22-10
Department Head Jo Ann Lurker	Signature JALurker	Date 11-22-10
Division Chair Stephanie Dees	Signature SDees	Date 11-22-10
Vice President of Instruction or Dean of Vocational Instruction Leigh Ann Collins	Signature Lac	Date 11-9-12



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

Designing Buildings and Building Systems

- Foundation systems - loads, footing, slab on grade, grade beams, piers, piles
- Exterior walls - wood components, concrete components, steel components
- Building Envelop Systems - roofing, siding, windows, doors
- Building Material - Wood - lumber production, properties, standard sizes, built-up shapes, erection methods, building codes
- Building Material - Concrete - ingredients, placement methods, formwork, reinforcing
- Building Material - Steel - standard sizes, typical spans, built-up shapes, erection methods, building codes
- Masonry Construction - CMU standard sizes and shapes, placement methods
- Roofing Systems - wood componenets, concrete components, steel components
- Windows, Interior, Floors, Finishess

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
Upon the completion of the course students will demonstrate the ability to understand: Common terminology and Units of Measurements Composition and properties of common building materials Standard sizes and shapes Conformance references and testing techniques Products, systems and interface issues Selected assembly techniques and equipment useage Build codes functions, standards and requirements	A portfolio containing student work projects will be assessed using the ruberic attached to this document. Eighty percent of the students will earn a minimum of 70% of the points available.

III. Required Text(s), Optional Text(s) and/or Materials to be supplied by Student.

Fundamentals of Building Construction, Materials and Methods by Edward Allen and Joseph Iano; John Wiley and Sons, Inc.

IV. Suggested Course Maximum - 20

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Written exams, projects, and daily lab work.

- A = 100 -90
- B = 89-80
- C = 79-70
- D = 69-60
- F = 59 or below

"C" or above in all degree specific classes

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:
 - Basic Intellectual Competencies
 - Perspectives
 - Exemplary Educational Objectives

- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.