FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	BCN 2614
COURSE TITLE:	Planning and Estimating
PREREQUISITE(S):	None
COREQUISITE(S):	None
CREDIT HOURS:	3
CONTACT HOURS/WEEK:	4
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	2
Laboratory:	2
Other _____:	
FACULTY WORKLOAD POINTS:	3
STANDARDIZED CLASS SIZE ALLOCATION:	25

CATALOG COURSE DESCRIPTION:

This course consists of a study of fundamental planning and a step-by-step method for preparing a quantity survey. The subjects covered in the course include job requirements, costs of construction operations and critical path method (CPM) of scheduling and preparing estimates in accordance with the C.S.I. format.

SUGGESTED TEXT(S):	Estimating in Building Construction; Dagostino, F.R.; Prentice-Hall, 4th ed. 1993.
IMPLEMENTATION DATE:	June 25, 1984
REVIEW OR MODIFICATION DATE:	Fall Term, 2002 (20031) Fall Term, 2008 (20091) – Outline Review 2007 Fall Term, 2009 (20101) - prerequisite

COURSE TOPICS

Rationale: This course covers scheduling using the critical path method (CPM) and the various construction costs in building construction. Also various methods used in quantity take-offs are studied using the CSI master format as a guide.

Intent: The intent is to develop an understanding in using CPM's and being able to make accurate quantity take-offs for residential and light construction buildings.

COURSE TOPICS	CONTACT HOURS PER TOPIC
I. The Estimate and Estimator A. The Contractor B. The Sub-Contractor C. The Architect/Designer D. The Owner	4
II. Cost Accounting A. Cost Accounting B. Future Estimates C. Management	4
III. Planning and Scheduling A. Planning B. Scheduling C. Compressing the Time Schedule D. Resource Scheduling	12
IV. Plan Reading	2
V. Contracts	2
VI. Construction Cost A. Material Cost B. Labor Cost C. Equipment Cost D. Overhead Cost E. Profit	4
VII. Excavation	4
VIII. Concrete Work	2
IX. Masonry	2
X. Rough Carpentry	4

COURSE TOPICS (CONTINUED)	CONTACT HOURS PER TOPIC
XI. Finish Carpentry	2
XII. Gypsum Wallboard	2
XIII. Insulation	2
XIV. Finishes	2
XV. Exams, Review, and Summaries	12

PROGRAM TITLE: Civil Engineering Technology

COURSE TITLE: Planning and Estimating

CIP NUMBER: 0715.020101

LIST PERFORMANCE STANDARDS ADDRESSED:

NUMBER(S): TITLES(S):

10.0 RECOGNIZE THE USE OF THE VARIOUS MATERIALS IN THE CONSTRUCTION INDUSTRY -- The student will be able to:

- 10.01 Write trip tickets, prepare delivery logs, and measure in-place materials.
- 10.02 Inspect placement and testing of storm sewer drainage pipe and gravity sewer pipe.
- 10.03 Inspect placement and test pressure pipe systems.
- 10.04 Run standard ASTM test of deformed steel bars and compute results.
- 10.05 Run standard ASTM test for flat stock and compute results.
- 10.06 Run standard ASTM test for standard 505 samples and compute results.
- 10.07 Run standard Rockwell hardness test.
- 10.08 Run standard ASTM test for shear and compute results.
- 10.09 Run standard ASTM test for compressive strength and compute results.
- 10.10 Run standard ASTM test for air entrainment.
- 10.11 Run standard ASTM test for volume.

12.0 RECOGNIZE THE USE OF THE VARIOUS MATERIALS OF SELECTED INDUSTRIES -- The student will be able to:

- 12.01 Identify clay pipe and give use.
- 12.02 Identify PVC pipe and give use.
- 12.03 Identify cast iron pipe and give use.
- 12.04 Identify steel structural members and give use.
- 12.05 Identify reinforcing steel and give use.
- 12.06 Identify concrete structures.
- 12.07 Identify asphalt types and uses.
- 12.08 Identify corrosion preventing coatings.
- 12.09 Identify concrete (RCP) pipe and give use.
- 12.10 Identify pre stressed concrete cylinder pipe and give use.

18.0 ESTABLISH GRADES, LOCATE PROPERTY LINES, AND UTILITIES; AND PRODUCE PLOTS AND CALCULATE CUT AND FILL BY AVERAGE-END-AREA -- The student will be able to:

- 18.01 Calculate horizontal alignment for civil engineering structures.
- 18.02 Calculate vertical alignment for civil engineering structures.
- 18.03 Plot and draft maps, plats, plans and profiles, charts and graphs.
- 18.04 Calculate cuts and fills using average-end-area method.
- 18.05 Calculate borrow pit quantities.

PROGRAM TITLE: Architectural Design and Construction Technology

COURSE TITLE: Planning and Estimating

CIP NUMBER: 1615.010100

LIST PERFORMANCE STANDARDS ADDRESSED:

NUMBER(S): TITLES(S):

02.0 IDENTIFY, SELECT, APPLY, AND MAINTAIN DRAFTING AND GRAPHIC MATERIALS AND EQUIPMENT--The student will be able to:
- 02.02 Use architectural and engineering scales.
- 02.03 Identify and select drawing materials.
- 02.04 Select, apply, and maintain basic drawing instruments.
- 02.05 Identify, apply, and maintain lettering instruments.
- 02.09 Select and apply architectural and engineering curves and templates.
- 02.10 Set up and maintain drafting machine, T square, and parallel rule.
- 02.16 Operate calculators.
- 02.17 Measure area using planimeter.
- 02.18 Identify and apply metric system.

04.0 INTERPRET DRAWINGS AND DOCUMENTS--The student will be able to:
- 04.05 Interpret architectural drawings.
- 04.06 Interpret specifications.
- 04.07 Interpret addendums.
- 04.08 Interpret notice of change and change orders.
- 04.10 Interpret structural drawings.
- 04.11 Interpret mechanical drawings.
- 04.14 Identify and interpret contracts.
- 04.17 Interpret master and development plans and documents.

06.0 INTERPRET AND APPLY CODES, REGULATIONS, AND TECHNICAL LITERATURE—The student will be able to:
- 06.02 Interpret and apply national building codes.
- 06.03 Interpret and apply C.M.H.C. residential standards.
- 06.04 Interpret and apply national fire code.
- 06.05 Interpret and apply provincial codes and regulations.
- 06.06 Interpret and apply municipal codes and regulations.
- 06.07 Interpret zoning bylaws and regulations.
- 06.13 Interpret and apply C.E.T. regulations.
- 06.14 Interpret and apply construction association regulations.

11.0 ESTIMATE BASIC QUANTITIES--The student will be able to:
- 11.01 Compute area and volume of buildings.
- 11.02 Estimate quantities of excavation and fill.
- 11.03 Take off quantities of form work.
- 11.04 Take off quantities of concrete.

LIST PERFORMANCE STANDARDS ADDRESSED: (CONTINUED)

NUMBER(S):	TITLES(S):
11.05	Take off quantities of lumber.
11.06	Take off quantities of masonry.
11.07	Interpret and complete standard estimators forms.