

Bossier Parish Community College  
Master Syllabus

**Course Prefix and Number:** CONS 102

**Credit Hours:** 3-2-3

**Course Title:** Materials and Methods II and Laboratory

**Course Prerequisites:** CONS 101 and MATH 112

**Textbook(s):** Mehta, Madan et al; Building Construction – Principals, Materials and Systems, 2<sup>nd</sup> edition. Pearson, 2013. ISBN: 9780132148696

**Course Description:** Detailed coverage of common methods of commercial and residential construction is provided including: site layout and preparation, foundation, structural, exterior finishes (walls, openings, roofs), interior systems (insulation, finishes and lighting) and engineered systems (mechanical, electrical, plumbing, fire suppression, and sustainability). Special emphasis is placed on safety, and modern tools and equipment. Lab provides opportunities for hands-on practice of learned methods.

**Learning Outcomes:**

At the end of this course, the student will:

- A. demonstrate understanding of the role of topography, soil, and excavation in the construction process;
- B. demonstrate understanding of typical wood, concrete, steel and masonry construction methods and common building types in each material category;
- C. demonstrate understanding of sustainable and energy conserving construction;
- D. demonstrate understanding of foundation systems, floor systems, wall systems and roof systems;
- E. demonstrate understanding of doors/windows, moisture and thermal protection, special construction and finishing; and
- F. deliver an effective speech.

To achieve the learning outcomes, the student will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

1. identify soil types, excavation methods, and topographic issues; (A)
2. identify the key elements and methods for wood, concrete, steel and masonry construction; (B)
3. identify the parts of key building types for each material category; (B)
4. cite and apply safety measures relating to hand and power tools, select proper hand and power tools for a given job; (B)
5. identify key elements of construction project graphics; (B)
6. measure and lay out a typical construction project; (B)
7. cite and apply sustainable and energy conserving materials and methods to proposed construction projects; (C)
8. identify parts of foundations and construction methods; (D)
9. identify the main parts of a wall frame systems; (D)
10. list and describe the various types of roofs; (D)

11. discuss standards of window and door fabrication; (E)
12. cite moisture and thermal protection methods for various construction types situations; (E)
13. discuss interior wall, ceiling and floor finishing materials; (E)
14. recognize the types of stairs; (E)
15. describe how exterior and interior trim is installed; (E)
16. describe exterior siding, brick veneer and stucco plaster wall finishing systems; describe exterior roof and foundation finishing systems; (E)
17. cite steps for interior and exterior painting and finishing; (E)
18. explain diagrammatic electrical wiring systems; (F)
19. explain diagrammatic plumbing systems; (F) and
20. explain diagrammatic heating, ventilation, and air conditioning systems. (F)

**Course Requirements:** Textbook & Workbook, Student Course Insurance

**Course Grading Scale:**

|              |   |   |
|--------------|---|---|
| 90% to 100%  | = | A |
| 80% to < 90% | = | B |
| 70% to < 80% | = | C |
| 60% to < 70% | = | D |
| < 60%        | = | F |

**Attendance Policy:** The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

**Course Fees:** This course is accompanied with an additional fee for supplemental materials and a lab insurance fee.

**Nondiscrimination Statement:** Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

COORDINATOR FOR SECTION 504 AND ADA

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