

## **NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY**

### **ARC 133 – CONSTRUCTION METHODOLOGY & PROCEDURES I (3 CR.)**

#### **Course Description**

Studies materials used in construction of buildings, covering foundations to structural framing systems. Includes appropriate use of materials for various construction types. Includes specification of materials and installation procedures; types of specifications and writing procedures; bidding procedures and, contract documents. Part I of II. Lecture 3 hours per week.

#### **General Course Purpose**

Develop an understanding of the elements of building structures of various materials and types and their methods of assembly. Recognize the unique value of materials and appropriate use in structures.

#### **Course Prerequisites/Corequisites**

None.

#### **Course Objectives**

Upon completing the course, the student will be able to:

- locate and interpret building codes and building permit process
- identify basic building materials and explain details of use
- identify different building structural systems to be used in their Architecture Projects.
- apply precautions necessary with given materials

#### **Major Topics to be Included**

- Organization of Construction Specification Institute Divisions (CSI)
- General & pre-construction requirements
- Organization of International Building and Residential codes (IBC & IRC)
- Virginia Code and permit process with local municipalities
- Fundamentals of materials and construction systems of:
  - Wood
  - Masonry
  - Steel
  - Concrete