The Department of Construction Management (CM) provides the student a program of study that prepares one for a variety of positions in the construction industry. The program consists of a management oriented technical curriculum regarding building construction, computer concepts, and business and general education. A graduate from the BCM program normally finds employment in the residential commercial or heavy civil construction industry. Typical employment opportunities include cost estimator, assistant project manager, project manager, assistant superintendent and field engineer.

We offer a degree in Building construction. Our degree is accredited by The American Council for Construction Education (ACCE). The degree we offer is a Bachelor of Science (B.S.) 4-year degree program. The program includes “General Education” requirements from the State of Florida and the University of North Florida. Please visit our website for more details. http://www.unf.edu/ccec/construction

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James.sorce@unf.edu
MAJOR: Building Construction  
MINOR: Business Administration (required)  
COLLEGE: Computing, Engineering, and Construction  
DEGREE: Bachelor of Science in Building Construction  
NOT A LIMITED ACCESS PROGRAM

CONTACT: James J. Sorce (james.sorce@unf.edu)  
Academic Advisor/Instructor  
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or  
Department of Building Construction Management  
College of Computing, Engineering and Construction  
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PROFESASIONAL CREDIT  
Due to our accreditation as a Four-year University we will not give credit for any professional work or education. Furthermore, no past work can be counted toward internship credit unless the student was active and registered for the class at the time of execution.

PROGRAM OF STUDY AT UNF (126 Credit Hours)  
*Mac 1105 or MAC 1147 may be additional requirements depending on the student’s level of math.*

General Education Requirements (21 Credit Hours):  
ENC 1101 (3) Rhetoric & Writing  
ENC 1143 (3) Rhetoric & Narrative  
ENC 3250 (3) Rhetoric & Writing  
Humanities Course (3) See approved list  
Two Additional Critical Thinking (6) See approved list  
Cultural Awareness (3) See approved list (BCN 4956 Study Abroad counts toward this requirement)

Prerequisites (38 Credit Hours):  
ACG 2021 (3) Financial Accounting  
STA 2023 (3) Elementary Stats for Business  
ECO 2013 (3) Macroeconomics  
ECO 2023 (3) Microeconomics  
BUL 3130 (3) Legal Environment of Business  
MAC 2233 (3) Calculus for Business  
BCN 1210c (3) Construction Materials  
BCN 1251 (3) Construction Drawing  
BCN 2405 (3) Intro to Structures  
PHY 2053 (4) College Physics I & PHY 2053 L College Physics I Lab  
*Prerequisites for PHY2053: MAC1105 & MAC 1114 (or MAC1147) plus high school physics or PHY1020*  
PHY 2054 (4) College Physics II & PHY 2054 L College Physics II Lab  
CGS 1100 (3) or approved Computer Course with CGS prefix

All lower-level prerequisite courses must be completed before upper-level BCN classes are attempted.  
Students may begin taking upper-level courses in construction when they have 4 or less uncompleted prerequisite hours remaining. Failure to complete the final 4hours in the following term will cancel any further upper-level construction class registration.
## Core BCM Classes at UNF (49 Credit Hours):
- BCN 2280 (3) Construction Surveying and Layout
- BCN 3782 (3) Introduction to Construction Computing
- BCN 3223 (3) Soils & Foundations
- BCN 3762 (3) Bldg Const Design/Codes
- BCN 3611 (3) Construction Cost Estimating
- BCN 4753 (3) Construction Administration & Economics
- BCN 4591c (3) Mechanical & Electrical Systems
- BCN 3224 (3) Construction Techniques
- BCN 4708 (3) Construction Documents/Contracts
- BCN 4431 (3) Structural Systems
- BCN 4709 (3) Construction Management Capstone
- BCN 4720 (3) Construction Scheduling
- BCN 4612 (3) Advance Cost Estimating
- BCN 4730 (3) Construction Safety
- BCN 4931 (1) Seminars: Construction Management
- BCN 4944 (3) Construction Management Internship
- BCN 4759 (3) Construction Finance and Cost Controls

## Business Minor requirements (12 Credit Hours):
- ACG 2071 (3) Principles of Managerial Accounting
- MAN 3025 (3) Administrative Management
- MAR 3023 (3) Principles of Marketing
- FIN 3403 (3) Financial Management  Prereq: ACG 2071

## BCM Elective Courses Pick Two (6 Credit Hours):
- BCN 3012 (3) History of Construction
- BCN 4751c (3) Housing and Land Development
- BCN 4587c (3) Green Construction/Sustainability
- BCN 4870c (3) Heavy Civil Construction
- BCN 4871c (3) Commercial Construction
- BCN 4801c (3) Industrial Construction
- BCN 4956 (3) Study Abroad: Construction Management**
- BCN 4944 (3) Construction Management Internship**
- BCN 4775 (3) International Construction
- BCN 4240 (3) Construction Equipment

## BCM PROGRAM TOTAL IS 64 UPPER DIVISION SEMESTER HOURS

**Internship can be taken for up to 6 credit hours 3 for internship and 3 for a BCN elective selection. An extra BCN elective class can also be taken to take the place of the internship requirement. Study Abroad can be taken for a maximum of 9credit hours.**

## BCN 4709 AND BCN 4931
Students are required to complete BCN4709 Construction Management Capstone and BCN 4931 Senior Seminar in their final term at UNF. The student must be cleared for graduation in the term that they are taking these classes. The exception for this is summer graduation. If the student is graduating in a summer term both BCN 4709 and BCN 4931 MUST be taken in the prior spring term.

## PROGRAM OF STUDY AT THE STATE/COMMUNITY COLLEGE
This program of study assumes completion of the AA degree at a community or state college in the state of Florida. Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university. If you transfer without an
AA degree and have less than 60 semester hours of acceptable credit, you must meet entering freshman requirements.

*P - Prerequisite courses are lower-level courses that are required for preparation for the university major and can be taken at a community college or, in a university lower division program prior to a student receiving a baccalaureate degree from the university. It is preferred that these prerequisites be completed in the freshman and sophomore years.

Students entering UNF from a Florida State college can transfer any lower-level (1000 and 2000 level) classes automatically if they bear the same number. No 3000 or 4000 level classes will be accepted unless stated by an institutional articulation agreement.

**ALL 3000 AND 4000 LEVEL BUSINESS CLASSES MUST BE TAKEN AT UNF.**

**PROGRAM OF STUDY AT THE COMMUNITY COLLEGE**

All courses must be completed with a grade of “C” or better.

### Prerequisites

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>(*P) ACG 2021</td>
<td>(3) Prin Financial Acc</td>
</tr>
<tr>
<td>(*P) STA 2023</td>
<td>(3) G(M) Elem Stats-Bus</td>
</tr>
<tr>
<td>(*P) ECO 2013</td>
<td>(3) Princ Macroeconomics</td>
</tr>
<tr>
<td>(*P) MAC 2233</td>
<td>(3) Calc For Bus</td>
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<tr>
<td>(*P) BCN 1210</td>
<td>(3) Const Materials</td>
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<tr>
<td>(*P) BCN 1252</td>
<td>(3) Const Drawing</td>
</tr>
<tr>
<td>(*P) BCN 2405</td>
<td>(3) Intro to Structures</td>
</tr>
</tbody>
</table>

Two Physics Courses With Labs

*(PHY I requires MAC 1105, MAC 1114 and High school Physics or PHY 1020)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>(*P) PHY 2053</td>
<td>(3) College Physics I</td>
</tr>
<tr>
<td>(*P) PHY 2053 L</td>
<td>(1) College Physics I Lab</td>
</tr>
<tr>
<td>(*P) PHY 2054</td>
<td>(3) College Physics II</td>
</tr>
<tr>
<td>(*P) PHY 2054 L</td>
<td>(1) College Physics II Lab</td>
</tr>
</tbody>
</table>


(*P) CGS 1100 or Computer Course with CGS prefix

*Department recommends a computer application software course or CGS x531 or 2060.*

**UNF CORE BCM CLASSES (Transferable from State/Community College):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCN 2280</td>
<td>(3) Survey: Construction Layout</td>
</tr>
</tbody>
</table>

**Business Minor requirements (Transferable from State/Community College):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>ACG 2071</td>
<td>(3) Principles of Managerial Accounting</td>
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</tbody>
</table>

**INTERNSHIPS**

One internship is required by the department for academic credit. Students can complete two internships for academic credit. The first internship meets the required internship and the second one replaces one of the student’s required construction elective classes. If the student is unable to complete an internship, for a valid reason, and exception can be made and the student will complete a third elective to fulfill the internship credit.

To register for the internship students must fill-out the paperwork online and turn it in to the professor in charge of the internship for that term. Once the professor approves it, the CM academic advisor will send you an email telling you that you have been given permission to register for the class. If the company is new and has never had an intern from UNF, the student
must get a letter stating their duties signed by their supervisor.
http://www.unf.edu/cce/c/construction/students/Students.aspx

GRADUATION INFORMATION
Students will complete a graduation application in MyWings in their final term at UNF as determined by both the student and the academic advisor. Students MUST be enrolled in BCN 4709 and BCN 4931 or have completed it the term prior to their graduation. The advisor will contact student via UNF email once the application deadline for graduation has passed.

OTHER DEGREE REQUIREMENTS
- Students must pass or meet exemption criteria for college-level communication and computation skills requirements prior to earning AA and completing 60 semester hours.
- A student may receive credit for a course only once. However, the GPA will reflect all repeated courses.
- This program includes a minimum of 64 upper division semester hours.
- Students should make periodic appointments with the BCM advisor to assess their academic progress.
- For substitution/waiver for classes see advisor.
- An approved dual/concurrent enrollment form is required prior to registering for courses at another institution.
- Students are strongly advised not to enroll in courses at another institution during their last semester at UNF.
- Graduation will most likely be delayed for students who attempt dual enrollment in their last semester.
- Minimum Total credits for Degree is 126 Semester Hours.

STUDENT ACTIVITIES

Professional Clubs
- Construction Management Association
- Associated Builders and Contractors
- Associated General Contractors
- Northeast Florida Home Builders Association
- Construction Specifications Institute

Honorary Club
- Sigma Lambda Chi

Events
- Employment Showcase…annual job fair.
- Hard Hat Banquet…year end celebration.
- Associated Schools of Construction student design competitions.
- Student professional Project Management seminars.

Community
- Builders Care…home repair.
- HabiJax…building new homes.
BCM Course Catalog Descriptions

- **BCN 1210 - Construction Materials (3)**
  Prerequisite: Declared Building Construction majors only
  This course offers an introduction to the economic, mechanical, non-mechanical, production, and aesthetic considerations of materials currently used in construction in accordance with the 16 sections of the Construction Specifications Institute (CSI) Masterformat. Students interact with local designers and builders to examine and document the consequences of material specification and selection.

- **BCN 1251 - Construction Drawing (3)**
  This course provides a basic knowledge on how to create and read building construction and architectural drawings. Topics include hand sketching, scaling of drawings, basic construction abbreviations and the extraction of information from construction drawings.

- **BCN 2280 - Surveying: Construction Layout (3)**
  This course provides the student with an introductory knowledge of construction surveying and construction layout, with field and classroom exercises.

- **BCN 2405 - Introduction to Structures (3)**
  Prerequisites: PHY 2053, and PHY 2053L.
  An introductory course in the evaluation of structural behavior as it relates to buildings, the properties of structural materials, and the structural behavior of load resisting members.

- **BCN 3012 - History of Construction (3)**
  An analysis of the cultural context of construction, emphasizing its centrality in the evolution and expansion of the built environments as expressions of ethical and aesthetic value systems.

- **BCN 3223 - Soils and Foundations (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  This course covers construction operations and production processes associated with soils, demolition, foundations, concrete mix design, and earth moving equipment. The course also includes field visits to soil and concrete laboratories.

- **BCN 3224 - Superstructures (3)**
  Prerequisite: BCN 3223.
  Study of the vertical construction process to include wooden platform frame construction, cast-in-place and pre-cast concrete construction, and steel erection. Included are interior and exterior finishes, vertical transportation systems, roofing, and other building components.

- **BCN 3611 - Construction Cost Estimating (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  Principles and practices in making quantity surveys and labor estimates for construction projects. Basic estimating and residential.

- **BCN 3762 - Construction Design & Codes (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  Exploration of building design and construction that conform to federal, state, county, and municipal codes, as well as the authority and responsibility bestowed in the several agencies. Research of the standard building codes required.
BCN 3782 - Intro to Construction Computing (3)  
Prerequisite: CGS 1100 or CGS 1570.  
This course covers the study of application computer programs employed in the construction industry. Areas of study include the Internet, construction scheduling, construction cost estimating and construction drawing.

BCN4240: Construction Equipment (3)  
Prerequisite: All program prerequisites to be completed prior to taking this course.  
Students in this course explore heavy construction equipment, construction methods, equipment productivity analysis, equipment selections, and scheduling and administration of heavy civil projects. Topics of the class will include: fundamental concepts of equipment economics, planning for earthwork construction, soil and rock, compaction and Stabilization Equipment, machine equipment power requirements, dozers, scrapers, excavators, trucks and hauling equipment, finishing equipment and cranes.

BCN 4431 - Structural Systems (3)  
Prerequisite: All program prerequisites to be completed prior to taking this course.  
A study of the structural systems: beams, columns, rigid frames, arches, trusses, enclosures, and foundation configuration methods used in construction. Included are the advantages and limitations of using each structural system, and each materials selection.

BCN 4587 - Green Construction and Sustainability (3)  
Prerequisite: All program prerequisites to be completed prior to taking this course.  
This course will examine topics in the field of Green Construction and Sustainable Construction. Topics covered will include the environmental impact of land development, minimization of the negative environmental impacts of construction, and resource utilization. Additional topics to be examined, current building assessment systems, the green building process, ecological design of buildings, green building materials, high performance buildings, building operations and commissioning, ethics in sustainable construction, alternative energy systems, water conservation, and current trends in sustainable construction.

BCN 4591C - Mechanical and Electrical Systems (3)  
Prerequisite: All program prerequisites to be completed prior to taking this course.  
This course introduces students to the principles and current practices in the application of mechanical & electrical systems as described in divisions 14 (conveying equipment), 15 (mechanical systems), and 16 (electrical systems) in the construction specifications institute (CSI).

BCN 4612 - Advanced Construction Estimating (3)  
Prerequisite: BCN 3611.  
Advanced techniques for estimating building construction. This course includes direct and indirect cost analysis for complicated construction systems; preparation of bid proposals, specifications, and other related documents. Students will be required to do projects using Excel spreadsheets.

BCN 4708 - Construction Documents and Contracts (3)  
Prerequisite: All program prerequisites to be completed prior to taking this course.  
A study of the legal and protective documentation used in the construction field. These documents include contracts, specifications, insurance and bonds.
- **BCN 4709 – Construction Management Capstone (3)**
  Corequisite: BCN 4931
  This course is a senior capstone experience, providing an opportunity for students to control and coordinate construction projects and personnel in a service learning environment. Students will apply their knowledge and skills in strategic bidding and estimating, ethical conduct, project delivery methods, value engineering, design/build, customer relations and communications.

- **BCN 4720 - Construction Project Planning and Scheduling (3)**
  Prerequisites: BCN 3782.
  The application of the critical path method and program evaluation review technique to construction planning, scheduled vs. actual job expenditures, cost forecasting, development of unit prices from field data.

- **BCN 4730 - Construction Safety (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  This course will examine topics in construction safety and human factors in construction. Topics covered will include: current construction safety issues and concerns, safety requirements and procedures, accident causation theories, ethics in safety, workers compensation law, accident reporting, handling stress in the workplace, preventing violence in the workplace, safety programs and policies and promoting and enforcing safety on the jobsite. Additional topics will include: ethics in management, human behavior in the workplace, leadership, management of jobsite personnel, stress management on the jobsite and preventing violence in the workforce and diversity in the workplace. The OSHA course for 10 hour construction training will also be included in this course.

- **BCN 4751C - Housing and Land Development (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  This course in an elective class for students preparing for careers in residential construction. Students learn a broad perspective of the technical knowledge and skills or methods related to residential construction projects. This course prepares students to apply the latest in residential construction technologies.

- **BCN 4753 - Construction Administration & Economics (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  Nature of construction costs, funding sources and arrangements, capital requirements, bonding, insurance, risk and contingency evaluation, general office operations, and bidding procedure.

- **BCN 4759 - Construction Finance and Cost Controls (3)**
  Prerequisite: All program prerequisites to be completed prior to taking this course.
  Students in this course examine the financial environment of a contracting company. They study the financial impact of decisions made at all levels in the contracting firm including comparative cost analysis. They also analyze the process, practice, and theory of cost controls. Students compare financial and cost control management techniques and the effect of these practices on the firm in relation to profit, profit margin, cash flow, bidding, capital equipment, procurement practices and budgeting.
• **BCN 4775 – International Construction (3)**  
  **Prerequisite:** All program prerequisites to be completed prior to taking this course.  
  Students in this course examine the problems that arise in construction when construction firms conduct business across national boundaries. They study major issues and practices in international construction and do an intensive analysis of the process, practice, theory in international construction and compare construction systems used. The students also analyze the effect of international construction on firms and the impact that globalization is having on the construction industry and the environment.

• **BCN 4801C - Industrial Construction (3)**  
  **Prerequisite:** All program prerequisites to be completed prior to taking this course.  
  This is an elective class for students preparing for careers in industrial construction. Key aspects of industrial construction practices are examined including project management, strategic bidding and estimating, ethical conduct, project delivery methods, value engineering, design/build, customer relations and communications.

• **BCN 4870C - Heavy Civil Construction (3)**  
  **Prerequisites:** BCN 3223, BCN 3611C  
  This is the first course in a two-course elective track for students preparing for careers in heavy civil construction. Students learn a broad perspective of the technical knowledge and skills or methods related to heavy civil construction projects, including bridges, highways, tunnels, pump stations, dams and underground utilities. This course prepares student to apply the latest heavy civil construction technologies.

• **BCN 4871C - Commercial Construction (3)**  
  **Prerequisite:** BCN 3223, BCN 3611C  
  This course will examine topics in the field of Commercial Construction. Topics covered will include project management of commercial projects, ethical conduct, project delivery methods, value engineering, customer relations, communications, software for commercial construction, time/cost controls, jobsite layout and control, subcontracting and purchasing, changes and claims, progress payments, project closeout processes, computerized project administration, submittals and shop drawings, documentation and record keeping, meetings, negotiations, and dispute resolution.

• **BCN 4900 – Directed Individual Study (1-3)**  
  This course provides BCM students the opportunity to study advanced construction topics, experience an international trip to study other culture's buildings and construction methods or participate in a BCM applied research program.

• **BCN 4930 – Special Topics : Building Construction (3)**  
  This course covers topics of current interests in the construction industry. Topics or focus may vary from semester to semester. This course may be repeated up to 12 credits hours with a change in course content.

• **BCN 4944 - Construction Management Internship (3)**  
  **Prerequisite:** BCN 3611  
  Students must apply to internship at least one month prior to the semester they will register for internship. The course is designed as a culminating experience in construction management, this course allows the student an opportunity to practice acquired knowledge under careful observation and in cooperation with an experienced construction manager.
• **BCN 4931 – Seminars: Construction Management (1)**
  **Prerequisite: Permission of Instructor**
  This course offers advance study within an area of specialization designed for the individual who desires a field of concentration. The course focuses on new information and technology in the construction industry. This course may be repeated when the subject matter is different for a maximum of ten credit hours.

• **BCN 4956 – Study Abroad in Construction Management (3)**
  **Prerequisite: Permission of the instructor**
  Students will study a country's construction practices, with a particular emphasis on the specific interest of the class. During this course, the student will: understand the culture, geography, history, and politics of the country; travel to the country; study the difference between construction in the U.S. and construction in that country; and learn about the current issues facing that nation and the state of the construction industry. The course will have three phases: pre-trip preparation and orientation, foreign travel, and post-trip work. May be repeated up to 9 credits.

See Catalog for Upper level courses outside the department