Program Information for General Public

School of Construction
College of Engineering & Computing

November 2016

I. Institution Vision and Mission

Vision:
Florida International University will be a leading urban public research university focused on student learning, innovation, and collaboration.

Mission:
Florida International University is an urban, multi-campus, public research university serving its students and the diverse population of South Florida. We are committed to high-quality teaching, state-of-the-art research and creative activity, and collaborative engagement with our local and global communities.

Values:
Florida International University is committed to the following core values:
Truth—in the pursuit, generation, dissemination, and application of knowledge
Freedom—of thought and expression
Respect—for diversity and the dignity of the individual
Responsibility—as stewards of the environment and citizens of the world
Excellence—in intellectual, personal, and operational endeavors

II. Program Academic Quality Plan

The Bachelors of Science in Construction Management (BSCM) is accredited by the American Council for Construction Education (ACCE).

A. Program Mission

The mission of the School of Construction is to provide enlightened leadership to the construction industry through its graduates; to increase and improve the body of working knowledge; and to promote the interdisciplinary transfer of technology. The School will continue to strive to produce professional construction managers who are informed and participating citizens with a sense of duty and responsibility, whose actions express high moral and ethical standards, and who understand the impact of their work on society.

B. Program Goals

The School continues to serve the needs of south Florida, the nation, and the world through high-quality teaching, research, and professional involvement through the following goals:

1. Provide effective education to students and prepare them to enter the construction profession.
2. Utilize available technology to enhance teaching and learning.

3. Broaden access to construction management education through distance learning opportunities.
4. Conduct and disseminate research in the construction area.
5. Foster and create opportunities for student-industry interaction.
6. Create the environment and provide adequate resources for the professional growth of the faculty.
7. Encourage, promote and support vibrant student organizations and an active alumni association.
8. Be the preeminent source of construction knowledge for industry and the community at large.

C. Program Assessment Tools

The program quality assessment plan of the School of Construction is divided into two parts: the Outcome Assessment Program and the Other Quality Measures. The Outcome Assessment Program consists of Academic Learning Compacts, Student Learning Outcomes, and the Surveys (survey responses from the graduating students, alumni, and employers). Other Quality Measures consist of faculty evaluation, input from the Industry Advisory Council, and feedback from the students, faculty, and the administration.

All graduating students at the undergraduate level are required to take the capstone course, BCN 4910 Senior Project. The School utilizes student performance data from this course to check if the students had gained the required level of knowledge and skill. These data serve as a measure of their readiness to begin their professional life. This also helps the School to assess the quality of the content and methods of instruction used in some of the basic courses, such as the estimating and the scheduling courses. Skills and knowledge gained in these courses have a direct correlation to their performance in the Senior Project.

In 2005, the university established an annual institutional effectiveness program that focuses on student learning outcomes and continuous quality improvement. The School of Construction participates in this program which requires the development of an Academic Learning Compact to evaluate program performance. The plan defines the program's learning outcomes, direct assessment measures, and how the data are collected and analyzed. The following is the department's Academic Learning Compact composed of three parts including content/discipline knowledge, critical thinking, and oral and written communication. The department utilizes the student performance data from the Senior Project course to fulfill the Academic Learning Compacts requirements as shown in Appendix A.

Bachelors Program Student Learning Outcomes
Capstone Course, BCN 4910, Senior Project

Performance of students in the Senior Project course is the basis of Academic Learning Compacts described in this section. All students must take BCN 4910 – Senior Project. This course is a capstone course that requires students to work on a comprehensive project, from forming an organization to preparing the bid package for a project. Students are required to

organize a construction company. They are expected to consider all aspects of a company setup procedure including issues concerning business, financial, and human resources. The project organization plan should take into consideration matters concerning permitting, constructability, legal issues and codes, etc. Students are required to submit a comprehensive project plan with detailed takeoff (estimate), pricing, a list of activities with appropriate relationships, and a CPM (critical path method) network. The course culminates with each student making a presentation to an "owner/client organization" and an audience consisting of faculty, alumni, and representatives from the industry. The students are required to not only apply all that they have learned but also to synthesize and integrate the knowledge gained to solve additional problems they have not previously encountered. In addition to testing their knowledge, the course emphasizes communication skills. Each student develops his or her own presentation using whatever audio/visual methods they deem appropriate.

Performance of the students in the Senior Project class is discussed in the first faculty meeting of the semester following the course. If deficiencies in student performance are perceived, the course within which the content is covered is reviewed. Actions including the following are taken:

- Review of course syllabus with suggested additions and or deletions of content.
- Discussion with individual faculty regarding course content and teaching methods and student performance expectations.

III. Student Achievement

A. Student Employment

Salary information is shown in Table 1.

Table 1. Employment and Continuing Education Data for Baccalaureate Graduates

	2010-2011	2011-2012	2012-2013	2013-2014
# of Graduates	76	67	69	50
% Employed after 1 year	75.0%	77.6%	84.1%	88.0%
Average of Annual Salary	$46,532	$51,196	$49,148	$60,604
Percent Continuing Education	18.4%	13.4%	11.6%	12.0%

Note: The years noted above represent the graduation years for FIU baccalaureate recipients. The salary and continuing education figures are based on outcomes from one year after graduation. Salary data are only for graduates who are employed full-time in Florida. Salary data are not provided for years with 10 or fewer full-time employees.

B. Student Awards

ABC Student Chapter teams participate in the national competition annually. In a continuing tradition at the School of Construction, the FIU team was placed second in fall 2016 competition and won the overall championship in 2014. In 2016 and 2015 FIU team won first place in

estimating. The FIU students ranked second in both the overall competition and the project management category in Spring of 2013 ABC Student Chapter Construction Management Competition.

The FIU team was competing with student teams from the best construction management programs in the nation. This is a testimonial to the dedication of students and faculty at the FIU School of Construction and their commitment to academic excellence.

In 2012 the FIU team earned the overall construction management championship (National Grand Championship) along with the second prize in the safety category. FIU team was also the champion in the 2006 competition, and besides the overall championship earned two other awards in estimating and scheduling categories. The FIU team won the third prize in estimating in 2010.

Four student chapters are active in the Department. These are: Associated Builders and Contractors (ABC), Associated General Contractors of America (AGC), National Association of Women in Construction (NAWIC), and Sigma Lambda Chi Honor Society. The ABC Student Chapter is the most active and works closely with the South Florida ABC.

C. Student Scholarships

Scholarships **–** The department currently has six endowed scholarships and had seven one-time scholarships over the last four years. The details showing the sources and the amount of scholarship funds are included in the Table below.

Table 2. Scholarship Fund (endowed)

NAME OF SCHOLARSHIP	DESCRIPTION
CONSUL TECH	1 for $1,000
BALFOUR BEATTY	1 for $2,000
CONDOTTE AMERICA	1 for $1,500
CASF	1 for $2,500
ASPE	1 for $2,000
KELLY FOUNDATION (CM & CIVIL)	2 for $2,000 ea.

D. Additional Information

Current Size of the Department- enrollment

The School has 11 full-time faculty and employs 5 to 10 adjunct faculty members in a given term. The School of Construction currently has three full-time staff. Fall headcount (enrollment) history is shown in Table 3.

Table 3. Enrollment Data

CIP Description	Student Level	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015
Construction/ Building Technology	Lower	26	19	24	22	32	36
	Upper	348	301	274	216	191	204
	Grad I	172	123	126	122	111	79
Constr./Building Tech. Total		546	443	424	360	334	319

Note: Students are counted as enrolled if they are taking at least one class during the term specified above and their program is based on their declared major.

Degrees Awarded

The historical numbers over the last five years for bachelors and masters are shown in Table 4. Our graduates are employed by all major construction companies in south Florida and nationwide. MCM Construction, OHL Arellano, Moss and Associates, Coastal Construction, Turner Construction, Skanska, Link Construction, Odebrecht Construction, Balfour Beaty are some of the major employers.

Table 4. Degree Production

CIP Description	Student Level	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Construction/ Building Technology	Bachelors	59	77	69	70	51	44
	Masters	106	90	69	32	62	64
	Doctoral	N/A	N/A	N/A	N/A	N/A	N/A
Constr./Building Tech. Total		165	167	138	102	113	108

- Bachelor degrees awarded decreased by 15 over the last six years.
- Master's degrees awarded decreased by 42 over the last six years.

IV. Program Admission and Degree Requirements

The **Bachelor of Science (BS) in Construction Management** is a four year program designed for students who are interested in preparing for professional careers in construction management, operations, and related areas in the construction industry. Upper level coursework includes topics such as building codes, structural design, scheduling, cost estimating, construction safety and management. The undergraduate program in Construction Management is nationally accredited by the American Council for Construction Education (ACCE).

Prospective students are encouraged to apply as early as possible, in order to complete the admissions process. Requirements include a high school degree from an accredited institution, official SAT/ACT scores, transcripts from all previously attended post-secondary institutions.

The curriculum consists of 121 credit hours. Lower division requirements include at least 60 hours of pre-engineering credits.

APPENDIX A – Academic Learning Compacts

Florida International University

Academic Learning Compact

Name of the Undergraduate Degree Program
Construction Management

Mission Statement
The mission of the School of Construction is to provide enlightened leadership to the construction industry through its graduates; to increase and improve the body of working knowledge; and to promote the interdisciplinary transfer of technology. The School will continue to strive to produce professional construction managers who are informed and participating citizens with a sense of duty and responsibility, whose actions express high moral and ethical standards, and who understand the impact of their work on society.

Student Learning Outcomes

FIU Construction Management graduates should be able to achieve the following:

Content/Discipline Knowledge
1. Demonstrate competence in construction estimating (Quantity Takeoff). 2. Demonstrate competence in using the principles of construction scheduling (Critical Path Method). 3. Demonstrate the ability to use modern construction management software necessary for planning, budgeting, and project management.

Critical Thinking
1. Demonstrate the ability to integrate and synthesize the knowledge and skills acquired. 2. Demonstrate the ability to apply research and investigational skills in obtaining new information and knowledge required to solve problems. 3. Development of a life-long learning/continuing education mindset.

Oral and Written Communication
1. Demonstrate the ability to clearly explain concepts, processes, techniques, methods and information. 2. Demonstrate the ability to collect, organize, analyze, interpret and present materials in writing in the form of a comprehensive project documentation package. 3. Demonstrate the ability to present data and information graphically, using charts and tables. 4. Demonstrate the ability to present in front of a jury using presentation slides.