

# PROGRAM OUTLINE

**FOR THE FOLLOWING PROGRAMS ONLY: Occupational Associate Degree and Higher**

INSTITUTION DATA					
<b>Name: Polytechnic University of Puerto Rico, Miami Campus</b>				<b>ID#: 2649</b>	
PROGRAM DATA					
<b>Program Title: Construction Management</b>					
<b>Credential Issued: Bachelor of Science</b>					
<b>Program Delivery:</b>	Campus <input checked="" type="checkbox"/>	Online <input checked="" type="checkbox"/>	Correspondence <input type="checkbox"/>	Other <input checked="" type="checkbox"/>	If other, give a <u>short</u> description Some courses are offered hybrid.
<b>Program Length</b>	Semester Hours: 121		Quarter Hours:		
<b>General Education Hours (See Minimum Requirements Below): 36</b>					
<b>*Minimum General Education Component:</b>					
Degree	Semester	Quarter			
OAD/AAS	9	14			
AA	36	54			
AS	15	22.5			
BA	45	67.5			
BS	30	45			

(The duration of a Bachelor Degree Program shall be a minimum of 120 semester credit hours, 180-quarter credit hours, or the recognized clock hour equivalent. A student transferring into the institution with an Associate Degree totaling 60-credit hours, will combine these Associate credit hours with the Bachelor credit hours to meet the minimum total stated above.)

## ENTRANCE/ADMISSION REQUIREMENTS:

(Programs of four hundred fifty (450) or more clock hours or the credit hour equivalent shall administer a basic skills examination to each student who enrolls unless the student has provided evidence of a high school graduation diploma, general equivalency diploma, or its equivalent.)

### GENERAL PROCEDURE

Students applying for admission to a higher education institution for the first time are classified as First-Time Freshman Applicants.

All students applying for admission to the freshman class of Polytechnic University of Puerto Rico must meet the following requirements:

1. File an application for admission. The application for admission form asks for important information which the applicant is responsible for submitting. Any false information given in the application form will be enough reason to reject said application unless the applicant is able to prove to the Registrar or the Director of Admissions that such information was given without malice aforethought.
2. Submit an official academic transcript from high school certifying graduation or the results of the high school equivalency examination. (GED)
3. Pay a thirty dollar (\$30.00) non-refundable application fee.

The application fee will not be applicable towards the student's registration charges. Fee is valid for two consecutive trimesters.

Student must provide a copy of a current driver's license or photo identification for placement in the files for official records upon acceptance to a degree program at the university.

### ENTRANCE

Applicants must have a minimum high school grade point average GPA of 2.00

Applicants, who do not meet the stated high school grade point average, can request, in writing, special consideration by the Admission Committee due to extenuating circumstances.

Transfer students applying to the university must have a minimum of a 2.00 GPA. Applicants with less than a 2.00 GPA can request to the Admission Committee acceptance into the university on a conditional status. Final determination is at the discretion of the Admission Committee.

**COURSE PLACEMENT AND EXEMPTIONS**

Students that present Advanced Placement tests scores can request course placement and exemptions. Results from Advanced Placement tests are used to grant course placement and exemptions to students. (see PUPR Catalog)

**TRANSFER STUDENTS**

An applicant who has studied at a recognized institution of higher education may apply for admission as a transfer student. Transfer applicants must have passed no fewer than nine transferable college credit-hours. They will be favorably considered for all academic work completed with a C or higher grade at each prior institution given that every course under consideration is required by the chosen program. Transfer credit-hours are limited to work satisfactorily completed at an accredited institution of higher education within a five-year period immediately preceding the application for admission.

A transfer applicant will not be considered for admission if he or she is on disciplinary suspension during or following the last term at the previous institution; or within one year after dismissal.

All students who have passed nine transferable credit-hours at an accredited institution of higher education prior to applying for admission to Polytechnic University of Puerto Rico must submit:

1. An official transcript from each institution of higher education previously attended. The transcript should be mailed directly from the institution(s), must furnish a statement of good standing. Student copies of official transcripts are not acceptable. The applicant who is actively enrolled in another institution at the time of application should request a current official transcript to be forwarded immediately. An official transcript, including the final grades of the last quarter or semester of attendance, must be requested and sent to the Admissions Office.
2. Payment of \$30.00 application fee with the completed application form. The application fee is not refundable and will not be applicable toward the student's registration charges.

Candidates from institutions of higher education, who would have met the admission requirements for high school applicants prior to their university experience, will be taken into consideration for transfer admission. **PUPR reserves the right to refuse applications for admission once enrollment limits are reached.**

Any **undergraduate** student applying for admission to Polytechnic University - Orlando Campus should know that only two thirds of the total number of credits required for the degree can be awarded as transfer credits, including no more than half of the specialization's credit requirements. The courses and credits that will be transferred to a student for the program they are enrolling in will be based on the academic program requirement. Transferred grades will not be used for the evaluation of her/his Grade Point Average. All transfer students must complete at Polytechnic University no less than 65% of the credits required for graduation in order to be eligible for academic honors.

**INTERNAL TRANSFER STUDENTS (Students transferred between Polytechnic University Campuses)**

Any student requesting transfer from one campus to another should:

- Complete an Authorization for Internal Transfer form and present it to the transferring campus. Transcript is not required since student's file will be transferred.
- Transcript request is not required for internal transfer students.
- If the student has an inactive status (two consecutive trimester) he or she should apply for

readmission and internal transfer.

- The student must complete a minimum of 36 credits of the bachelor's degree at Orlando Campus to be considered for graduation.
- Internal transfer applicants under academic probation will be transferred under the same status.
- Internal transfer applicants will have to appeal to the Admissions Committee in order to be considered if he/she is on disciplinary probation, suspension or dismissal from the previous institution.

All the courses and credits from the previous campus will be evaluated for program he/she is enrolling. The additional course analysis for the completion of the program will be based on the academic program requirements. However, all the attended credits under the same institution will be used to determine the student Grade Point Average.

### **NON-DEGREE STUDENTS**

Applicants who have studied at an institution of higher education and have been authorized to take courses at Polytechnic University of Puerto Rico to complete requirements from their institution are classified as special students. Also, applicants who are not interested in obtaining an academic degree from PUPR or a grade, except for professional development coursework, are classified as special students. An applicant desiring to enroll as a special student must submit:

1. A completed application for admission form.
2. Payment of \$30.00 non-refundable application fee with the application form.
3. Submit an authorization as Special Student.

If the person wants to change this classification to a Regular Student, he or she will have to fulfill all the requirements of the Admissions Office, take the prerequisites courses and obtain a grade of C or higher in each one. A Special Student does not qualify for financial aid until the classification to Regular Student has been made.

### **AUDIT STUDENTS**

Audit Students are required to submit an admission application and pay a \$30.00 non-refundable admission fee. These students are not interested in earning credit-hours toward a degree, diploma, or certificate. They may attend classes as auditors after paying the tuition fees, with the authorization of the Faculty Dean and Registrar, but will not receive grades or credit for work done on any subject.

### **HOME SCHOOLING**

Polytechnic University of Puerto Rico established a system of academic credential evaluation for each homeschooler applying for admission into an academic program. The purpose is to determine whether the applicant complies with all the criteria for eligibility.

These criteria are the following:

- File an application for admission with the following attached documents:
  - a. Non-reimbursable \$30.00 fee
  - b. College Entrance Examination Board test results
  - c. Recent Birth Certificate
  - d. Home Schooling – Educated Student Certificate (PUPR will provide the form) (Document must be notarized)

**INTERNATIONAL STUDENTS**

All instruction and written work at Polytechnic University - Orlando and Miami campuses is in English. Students whose primary language is not English must provide proof of English proficiency. The standard measure of this ability is the TOEFL (Test of English as a Foreign Language). The applicant should provide a minimum score of 79 (internet-based test), 213 (computer-based test), or 550 (paper test) to enter the regular program courses. If TOEFL or an equivalent test is not provided or does not comply with the minimum score, an English proficiency test will be given by the Admission Office to assess his/her abilities and prepare a development plan.

Polytechnic University of Puerto Rico (San Juan, Miami, and Orlando campuses) is authorized by the Immigration and Naturalization Services (INS) to issue a Certificate of Eligibility for Nonimmigrant Student Status (Form I-20) for qualified international students who are not citizens of the United States of America or permanent residents.

Following admission acceptance, the applicant must submit all documentation required by the INS and established in the Applicant's Checklist. Afterward, the Admissions Office issues and delivers the Form I-20 to admitted students. The admitted students then deliver the completed Form I-20 to the Bureau of Immigration and Citizenship Services (BICS) of their country of origin in the petition of a Student Visa Number. Subsequent to the BICS authorization of a Student Visa Number, admitted students return this Form I-20 to the Admissions Office. Applicants are classified as international students only after receipt of all required documentation and paid registration fees for the first academic term of full-time enrollment.

**PROGRAM OBJECTIVE:**

PROGRAM EDUCATIONAL OBJECTIVES: Graduates from the Construction Management Program will be able to:

1. Participate as crucial team members in the construction industry by providing knowledge of construction methods and techniques, as well as business techniques.
2. Participate as construction management professionals in leadership positions using appropriate communication skills, and ethical standards.
3. Perform as entrepreneurs, contractors, or providers of construction services, alternatives, and solutions.

**PROGRAM DESCRIPTION:**

The Bachelor of Science in Construction Management program consists of 36 credit hours in General Education (15 credit hours in Humanities, and 21 credit hours in Mathematical and Science), 22 credit hours in Business courses, 60 credit hours in Construction Management courses, and 3 credit hours in Free electives. Thus, the Bachelor of Science in Construction Management totals 121 credit hours.

PROGRAM BREAKDOWN BY COURSE				
Course Number	Course Title	Credit Hours	Clock Hours (If Applicable)	Services (If Applicable)
	NOTE: If a bachelor's degree program entrance requirement is to transfer having earned an associate degree, enter the transfer of credit here.			
	<b>General Education (15)</b>			
ENGL 1020	English Composition I	3		
PSYC 1010	Introduction to Psychology	3		
ENGL 1026	Fundamentals of Speech Communication	3		
	General Education Component	3		
	General Education Component	3		
	<b>For the Electives, the student chooses 2 of the following Gen Edu Humanities Electives</b>			
HIST 1350	History and Art Appreciation	3		
SOHU 3060	Selected Topics in Socio-Humanistic Studies	3		
SOHU 2010	Socio-Humanistic Studies I	3		
ENGL 2010	Analysis of World Literature	3		
SPAN 0120	Elementary Spanish I	3		
SOHU 2030	Introduction to Sociology	3		
	<b>General Education - Math and Science Courses (21)</b>			
MATH 0110	Intermediate Algebra	3		
MATH 1330	Precalculus I	3		
MATH 1340	Precalculus II	3		
SCIE 2410	General Physics I	3		
COMP 2020	Computer Programming for Business	3		
CEE 2110	Engineering Geology	3		
STAT 2010	Probability and Statistics	3		
	<b>Business Courses (22)</b>			
MGMT 1010	Principles of Management	3		
PHIL 3000	Business Ethics	3		
ACCO 2010	Accounting Principles I	4		
MGMT 2020	Business Law	3		
COMP 2010	Business Application Programs	3		
FINA 2010	Finance	3		
ECON 3010	Microeconomics	3		
	<b>Construction Management Courses (60)</b>			
MGMT 3210	Construction Management	3		
MGMT 3230	Construction Materials & Methods	3		
COMT 1010	Construction Graphics	3		
COMT 2010	Construction Safety and Health	3		
MGMT 3220	Construction Contract & Legal Documents	3		
COMT 2020	Construction Blueprints and Specifications	3		
COMT 2030	Structural Concepts	3		
MGMT 3240	Construction Estimates & Costs	3		
COMT 3010	Steel Structures	3		
COMT 3020	Soil Mechanics for Construction	3		
COMT 3030	Building Codes and Standards	3		
COMT 3040	Reinforced Concrete Structures	3		
COMT 3050	Mechanical Systems	3		
MGMT 4210	Project Planning and Control	3		
COMT 3060	Construction Site Work & Equipment	3		
COMT 3070	Electrical Systems	3		

COMT 3080	Temporary Structures	3		
COMT 4010	Timber Structures	3		
COMT 4020	Roofing Systems	3		
COMT 4100	Construction Management Capstone	3		
	<b>Free Elective Component (3)</b>			
Free Elective	Free Elective	3		
<b>TOTAL:</b>		121		

<b>INVENTORY OF EQUIPMENT:</b>		
Quantity	Equipment Item	Brief Description Of Equipment
1	Computer Lab	
12	Desktop Computers	
2	Instructor Desk	
12	Chairs with caster wheels	
2	Projector	Overhead projector
2	Whiteboard	Dry erase board
4	Desktop Computer	Instructor's computer
1	Printer	
1	Smart Board	Interactive whiteboard
	Wireless Connection	
Platform for Online Education: Blackboard Learn™		
Minimum Operating System for Online Students: Minimum Windows 7 or higher Mac OSX 10.8 or higher (Recommended Windows 10 Mac OS 10.12)		

<b>TEXTBOOKS/LEARNING RESOURCES:</b>
(Include Publishers and Publication Dates)
The Confident Writer, Houghton Mifflin, 2009
Human Communication, Pearson, 2009
Literature World Masterpieces, Prentice Hall, 2007
The Art of Being Human, R. Janaro Pearson, 2017
Introduction to Psychology, Thomson, 2010
Essentials of Sociology: A down to Earth Approach, Pearson, 2015
World Civilizations 8 <sup>th</sup> Edition, Cengage, 2018
College Algebra, Pearson, 2016
Physical Science, McGraw Hill, 2014
Microsoft Office 2007, Microsoft, 2007
Accounting, Chapter 1- 13, Prentice Hall,2018
Fundamentals of Financial Management, B. Bhabotosh, Prentice Hall, 2012
Annual Editions, Marketing, 09/10, 2009
Managing Information Technology, Prentice Hall, 2012
Diversity in Organizations, Thomson, 2007
Leadership: Enhancing the Lessons of Experience, McGraw Hill, 2009
Organizational Behavior, R. Griffin, Cengage, 2014
A System Approach to Small Group Interaction, McGraw Hill, 2010
Law and Ethics in the Business Environment, Thomson, 2008
Strategic Management an Integrated Approach, Houghton Mifflin, 2008
Global Business Today, McGraw Hill, C. Hill, T. Hult 2017
Critical Thinking, McGraw Hill, 2015
Managing Organizational Change A Multiple Perspective Approach, McGraw Hill, 2009
Human Resources Management, Houghton Mifflin, 2007
A guide to the Engineering Management, American Society for Eng. Management, ASEM, 2012
Annual Editions: Business Ethics, Eric Teoro Edited, McGraw Hill, 2017
Concepts in Federal taxation 2015, Kevin E. Murphy & T.K. Flesher, McGraw Hill, 2015
Business Statistics in Practice, Boweman,O'Connell Murphree McGraw Hill, 2011
Introduction to Management Science, Bernard W. Taylos III, 2016
Strategic Management: Text & Cases, G.G. Dess, Lumpkin, A.B. Eisner & McNamara, McGraw Hill, 2016

The Macro Economy Today, Ronald W. Hilton, McGraw Hill, Pearson, , 2012
Human Communication, Judy Pearson, McGraw Hill, 2006
T. Miller-Nobles, H. Mattison, E. M. Matsumura. (2018) Accounting: The Financial Chapters. United States of America
B. R. Barringer, R. D. Ireland. (2016). Entrepreneurship: Successfully Launching New Ventures. United States of America.
T. C. O'Guinn, A, T. Allen, R. J. Semenik, A. C. Scheinbaum. (2015). Advertising & Integrated Brand Promotion. United States of America.
B. R. Schiller. (2016). The MACRO Economy Today. United States of America.
J. S. Harrison, C. H. St. John. (2014). Foundation of Strategic Management. United States of AMERICA
E. Teoro. (2017). Business Ethics: Annual Edition. United States of America.
Precalculus Functions and Graphs, 5 <sup>th</sup> Edition, McGraw-Hill Publisher, 2000
Probability and Statistics for Engineers, Prentice Hall, 2010
Physics, Brooks Cole, 2009
Smith, D., Ramirez, A. & Congdon-Fuller, A., Technical drawings 101 with AutoCAD 2022: A Multidisciplinary Guide to Drafting Theory and Practice with Video Instruction., SDC Publications, 2023
Wakita, O.A, Bakhoun, N.R. & Linde, R. M., The Professional Practice of Architectural Working Drawings Wiley, 2023
Goetsh, D., Construction Safety and the OSHA Standards., Pearson, 2021
Huth, M. W. Understanding Construction Drawings, Cengage Learning, 2019
Shaeffer, Ronald E., Elementary Structures for Architects and Builders, Pearson, 2006
Geschwindner, Louis F., Unified Design of Steel Structures, Wiley, 2023
Cheng Liu and Jack B. Evett, Soils and Foundations, 2014
Council, I.C., Thornburg, D.W.,& Kimball, C., International Building Code Illustrated Handbook, McGraw-Hill, 2021
Schaeffer, R.E., Reinforced Concrete: Preliminary Design for Architects and Builders, McGraw-Hill, 1992
ATP American Technical Publishers, Mechanical and Electrical Systems for Construction Managers, 2013
Robert L. Peurifoy, Clifford J. Schexnayder, Robert L. Schmitt, Aviad Shapira, Construction Planning, Equipment, & Methods, Mc-Graw Hill, 2023
Robert Ratay, Temporary Structures in Construction, McGraw-Hill, 2012
Donald E. Breyer, Kelly E. Cobeen, Zeno Martin, Design of Wood Structures-ASD/LRFD, McGraw-Hill, 2019
NCCER, Roofing Level I, Pearson, 2021
NCCER Roofing Level II, Pearson, 2021
Lewrick, M, Link, P,& Leifer, L., The Design Thinking Playbook: Mindful Digital Transformation of Teams Products, Services Businesses and Ecosystems, 2018
Brown, T. , Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation, 2019
IDEO, Human Centered Design Toolkit: An Open-Source Toolkit to Inspire, 2011
Daft, R., & Marcic, D., Understanding Management, Cengage, 2023
Capsim, Introduction to Business: A Primer Companion to Capsimcore Business, Createspace Independent Publishing Platform, 2016
Guffey, M.E. & Loewy, D., Essentials of Business Communication. Cengage, 2023
Hughes, Ginnett & Curphy, Leadership: Enhancing the Lessons of Experience, McGraw-Hill, 2022
James C. Van Horne, John M. Wachowicz, Jr., Fundamental of Financial Management, 2008
Frederick E. Gould and Nancy E. Joyce, Construction Project Management, Pearson, 2022