

# What Is the Typical Faculty Demographics for a Construction Management Program in the United States?

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This article discusses the academic degree attained and construction-related industry experience of faculty in Construction Management programs in the United States. A survey was used to determine the faculty demographics' including educational level, years of work experience and current faculty rank. In addition, the survey categorized programs by size (number of students) whether they served under-graduate and/or graduate students, and what college they resided in, as well as identified the university as research or non-research. The survey was sent to 69 Construction Management, or equal, programs that had both ASC membership and ACCE accreditation. The authors categorized the data so that trends, similarities and differences between Construction Management programs could be shown. Key data was evaluated to examine relationships between Construction Industry Experience, Highest Degree Attained, and whether a Doctorate is required for promotion to Full Professor.

**Keywords:** Construction Management, Faculty, Educational Background, Masters Degrees in Construction Management, Doctorates in Construction Management

## Introduction

There is an ongoing disagreement in construction academia concerning what is considered the terminal degree in Construction Management (CM) and how much construction industry experience should be required of faculty members. To answer these questions, the authors felt that identifying the demographics of current CM faculty would shed light on actual hiring and promotion practices. In this study, demographics refer to work experience, rank and education and do not include some of the more traditional categories such as race or gender. This paper began with a survey of all the construction management programs at universities in the United States that are members of the Associated Schools of Construction (ASC) and have American Council for Construction Education (ACCE) accreditation. The goal of this survey was to determine, on average, the current demographics of construction management programs in the United States in terms of highest degree attained, construction industry experience, and academic rank. This paper will summarize key information gathered from the survey and discuss the results of the findings.

In addition, the survey gathered information on the administrative home (College or School) in which the construction management program resides and whether the university is considered a research or teaching institution.

## *Literature Review*

Very little research has been conducted on the topic of CM faculty background and status. One paper discussed salaries (Burt and Choudhury, 2002); however, their research did not evaluate industry experience with respect to those salaries.

In the 2002 Associated Schools of Construction 38<sup>th</sup> Conference, the theme was "The Scholarly Pursuit of Construction Knowledge". The opening comments, published as delivered (Beliveau and Knox), include this comment from Mr. Beliveau: "The first issue I faced when I moved to academia was the lack of credit for industrial experience in the academic world. No matter where you have been in academics, degree rules".

Another research paper (Ciesielki, 2000) compared tenure and promotion practices in Construction Management and Civil Engineering. Findings regarding a requirement of Doctorate indicated that "...only 31% of the Construction Management schools said a Ph.D. is currently required for tenure; and only 29% said it should be."

Given the lack of documented research in this area, this paper aims to determine the apparent value of industry experience and Doctorate requirement for CM faculty. Faculty makeup within programs that have both ASC membership and ACCE accreditation will be analyzed.

## **Method: Survey**

### *Preparing and Administering the Survey*

The first step in gathering data was to develop a survey that would provide information on the current faculty targeted for this study. The data sought was the educational background, years of construction experience, and current academic rank of all individual faculty members. In addition, information on the university type (research or teaching), program size, and administrative affiliation were included. Table 1 lists the nine data fields of information requested. After the survey was completed, those responding were all asked one more question. Does your program require a doctorate degree for a faculty member to become a full professor?

While considering what information would be gathered, the means of collecting the data needed to be agreed on as well. It was decided to use an online spreadsheet feature called Excel Online. This free survey feature allows the user to list the requested information along with preselected response choices via dropdown menu. During the survey, respondents need only to click on each category of requested information and then to select the most appropriate response. When each respondent completed the survey, the new data immediately and automatically populated a spreadsheet by adding a row of information to the spreadsheet.

The survey request was emailed to the department chairs of the 69 programs that are presently listed on both the ASC and ACCE websites.

A cover letter, sent via email, contained the website of the survey, the purpose of the survey and brief instructions to assure complete responses. Department chairs were asked to fill out the survey for each individual faculty member in the department to ensure that each responding program was covered 100 percent. This would eliminate the chance of receiving a percentage less than 100 for each university which could drastically skew the results of the data. Respondents were given 30 days to complete the survey.

To identify general differences in surveyed programs, responses were divided into three categories: University, CM Program, and Individual Faculty Member. Table 1 lists the nine data items requested and their respective categories.

**Table 1: Survey Information by Category**

<b>Category</b>	<b>Data Field</b>
<b>University</b>	<b>Name of University</b>
<b>University</b>	<b>Type- Research, Non Research</b>
<b>CM Program</b>	<b>Size of Program by number of Students</b>
<b>CM Program</b>	<b>Undergraduate or Graduate</b>
<b>CM Program</b>	<b>What School is Program a part of?</b>
<b>Individual Faculty Member</b>	<b>Construction-Related Work Experience (years)</b>
<b>Individual Faculty Member</b>	<b>Rank: Lecturer, Assistant, Associate or Full</b>
<b>Individual Faculty Member</b>	<b>Education Degree</b>
<b>Individual Faculty Member</b>	<b>Full time or Part time</b>

The University category served to identify the university and whether it is considered a research or non-research university. As it turns out, this information was not used in the results or discussion of the topic.

The CM Program category requests information specific to the construction management program itself: the number of students, whether a graduate program is incorporated, and the administrative school or college type in which the program resides.

The four faculty categories classified individual faculty members as either full- or part-time, determined the approximate number of years each had worked in the construction industry, identified educational background by highest degree earned, and identified their current academic rank.

### *Response to the Survey*

In the first week after the survey was distributed to 69 programs, 14 CM programs had responded. At this time, a second email was sent as a reminder. After three weeks, 19 programs had responded. In the final week of the survey, four more CM programs were added after phone calls were made. Schools that had submitted responses for only one or two of individual faculty members were removed if an attempt to get responses for the entire faculty failed. The survey closed after 30 days with 23 programs (33%) providing complete responses.

These 23 responding programs equated to 161 individual faculty members. A check of program websites validated that the 7.0 average faculty size appeared to be accurate.

## **Results**

The results of the survey provide insight into the demographics of typical Construction Management program in terms of:

- What School or College the Program Resides
- Work Experience of the Various Levels of Education
- Highest Degree Earned and Academic Rank (Full, Associate, Assistant Professor, or Lecturer)
- Years of Experience and Academic Rank in the Institution
- Terminal degree required for Full Professorship

The results will be summarized and analyzed in the Discussion section of this document.

### *Faculty Positions by Rank*

Figure 1 illustrates the division of professors by their academic rank. As in most of the discussion in the following paper, the faculty respondents were ranked as full professor, associate professor, assistant professor, or lecturer. Adjunct teachers were placed in lecturer status. The data shows that the Associate Professor and Lecturer categories each comprised 29% of the responding programs' faculty, while Full Professor and Assistant Professor categories were each 21% of the total.

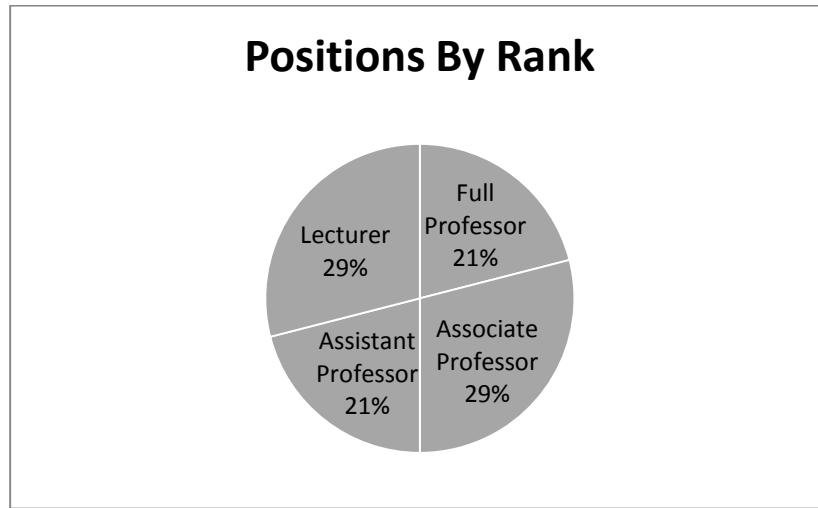


Figure 1: Faculty Positions by Rank

*Administrative Body in Which Program Resides*

Figure 2 shows that approximately half of Construction Management programs reside in a College of Engineering. About one-fourth is part of a college or school of Architecture, and only 2% are within Schools or Colleges of Business. The remaining 23% are either independent schools of Construction Management or are situated in various other schools or colleges.

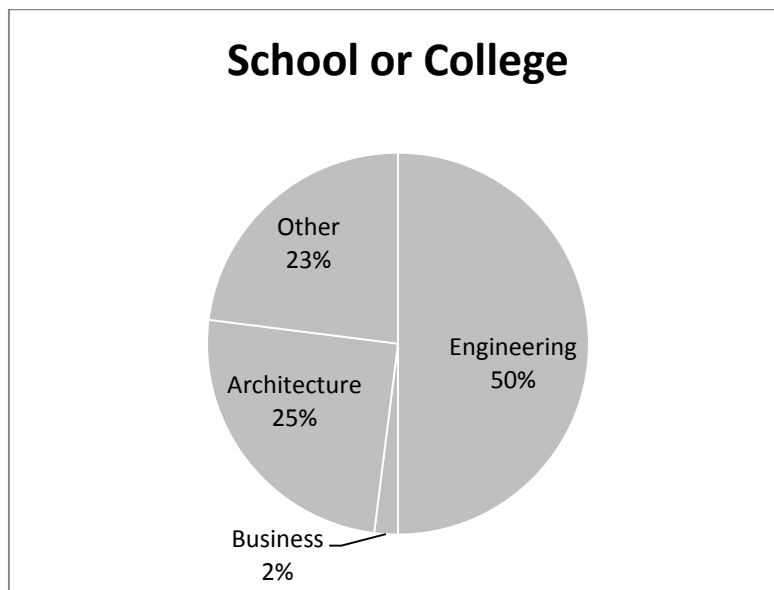


Figure 2: School or College in which Program Resides

*Construction-Related Work Experience of Faculty*

Academic programs in Construction Management employ faculty members with a great deal of construction industry experience. Of the respondents, 47% indicated more than 15 years of Construction Industry experience; 10% had 11-15 years of experience, 26% 6-10 years, and only 17% had less than six years of experience as illustrated in Figure 3.

A total of 48% of all respondents indicated that they had an earned Doctorate. Of those, only 34% had greater than 15 years of construction-related work experience while 34% had less than six years of industry experience. Faculty members whose highest earned degree was a Masters comprised the greatest proportion of those who had more than 15 years of experience. One in four respondents indicated more than 15 years of experience and a Masters degree. Those with just a Bachelors degree all had six or more years of work experience.

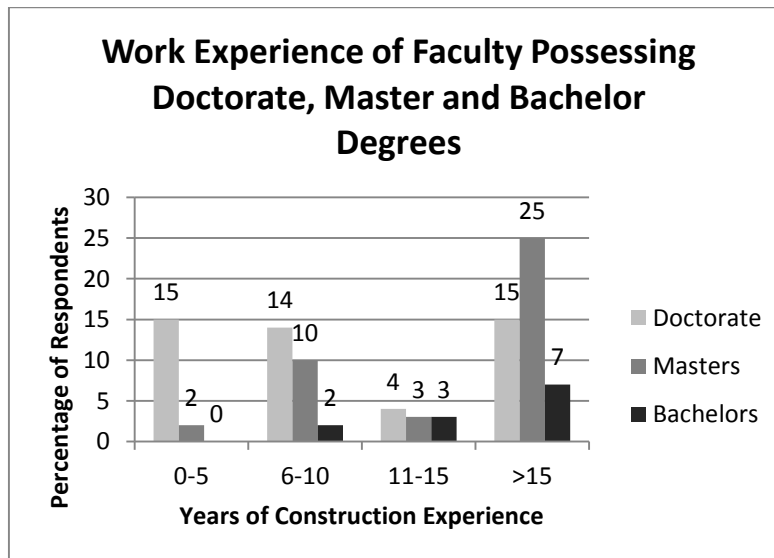


Figure 3: Work Experience of Faculty Possessing Doctorates, Masters and Bachelor Degrees

*Terminal Degree and Faculty Rank*

All faculty members included in the survey were categorized by their academic rank. These are the results by percentage:

- 20% were ranked Full Professor
- 31% were ranked Associate Professor
- 21% were ranked Assistant Professor
- 28% were ranked Lecturer

Figure 4 illustrates the years of work experience of respondents by academic rank. One in five respondents indicated that they were an Associate Professor with a Doctorate. In contrast, only one percent with a highest degree of Bachelors indicated a position greater than a Lecturer. Of the respondents, almost half possess a Doctorate (48%).

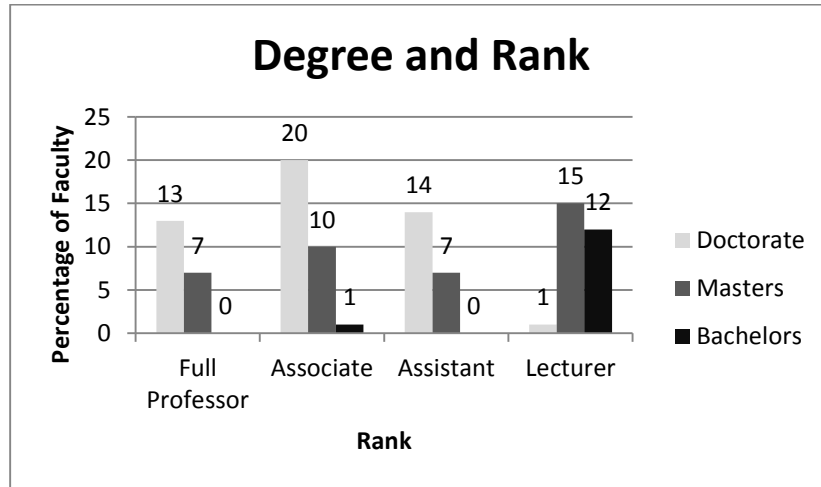


Figure 4: Terminal Degree and Academic Rank

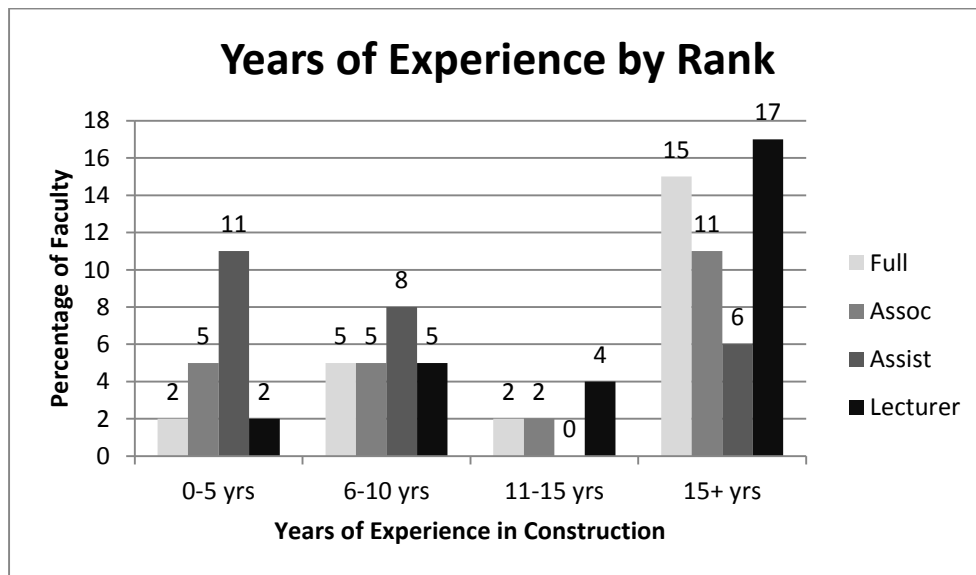


Figure 5: Years of Experience by Rank

### *Terminal Degree Required for Promotion*

Figure 6 illustrates that of the 14 schools responding to this additional question, 50% require a Doctorate degree. Only 21% indicated that a Doctorate is not required for full professorship. The remaining respondents allow an “equivalent” to the Doctorate. Ciesielski noted in 2000 that only 31% of the universities surveyed required a Doctorate for Tenure. Ciesielski’s study did not compare full professorship requirements.

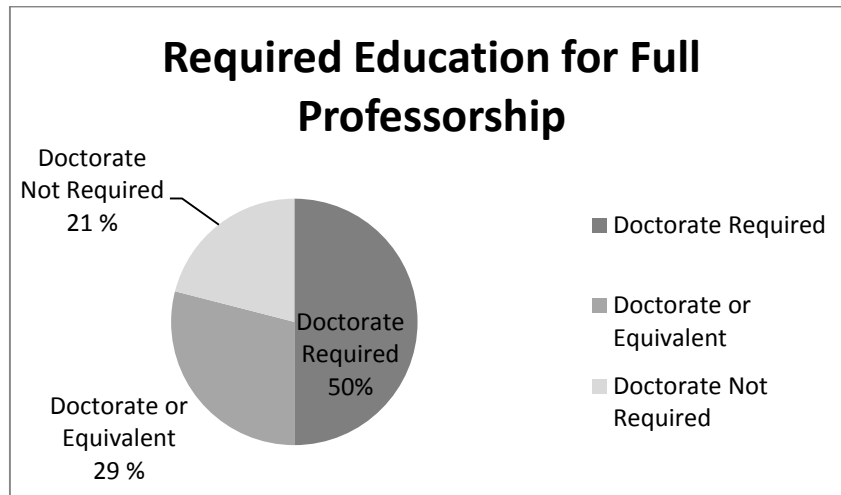


Figure 6: Required Education for Promotion

## **Discussion**

### *Different Schools/Colleges*

Data was not analyzed separately for each University type, College (or School), or program size. It is worth noting, however, that 50% of the Construction Management programs surveyed reside in a College of Engineering. Because Engineering programs typically require higher levels of math and science, there is reason to speculate whether construction industry experience is valued as highly as academic preparation at the college level in those situations.

### *Faculty Rank and Its Relationship to Education and Experience*

The largest single class of respondents (25%) is described as having greater than 15 years experience and also possessing a Masters degree. The largest class as defined by rank (20%) is Associate Professor with a Doctorate. A total of 52% of those surveyed have greater than 15 years of Construction Industry Experience. Fifteen percent of all faculty have a Doctorate and more than 15 years of industry experience.

Given that 47% of all individual faculty members included in survey results have greater than 15 years of industry experience, it is clear that universities acknowledge that practical experience is valuable when hiring for faculty positions.

### *Required Education for Full Professorship*

Responses to the additional survey question concerning required education level for CM faculty suggest a trend toward requiring a Doctorate for Full Professorship. Of the programs completing the survey, 50% indicated that a Doctorate was required for promotion to Full Professorship. An additional 29% noted that a Doctorate or Equivalent was required to achieve this academic rank. The equivalent to a Doctorate could require such deliverables as:

- Publications in refereed journals
- Recognition as an expert in his or her field of study
- Funded Scholarly Research
- Publication of Textbook Materials

### **Conclusion**

The purpose of this research paper is to define the demographics of the faculty in Construction Management Programs in the United States in terms of academic degree attained and construction-related work experience. The authors also set out to determine the significance of industry experience as related to the standard faculty ranking system, as well as to evaluate the “terminal degree” requirement for promotion to Full Professorship.

This study provides evidence that construction industry experience is valued in ACCE-accredited Construction Management programs. Only 17% of the faculty responding to the survey indicated less than six years of experience and of those indicating such minimal experience, 88% possessed a Doctorate, suggesting these individuals relied on an academic approach rather than accumulated experience to Construction Management Education.

In addition, there appears to be a growing trend with respect to requiring a Doctorate Degree, at least for promotion to Full Professor.

This study addresses basic links between terminal degrees, construction-related work experience, and faculty rank; however, there is great opportunity to expand on this research by addressing additional demographics such as race, gender, type of work experience (construction trade or management), field of study (construction management, engineering, business), terminal degree (PhD, JD, EdD, or Masters degree), as well as years of teaching service. In addition, a study of department search advertisements compared to the actual search results could yield valuable information concerning the demand for higher education and related work experience required for CM faculty positions. The authors' intent is to gather and analyze additional information to further enlighten those in the field of Construction Education.

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