



Development of Graduate Leadership and Management Programs for Working Professionals

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Problem Definition

Companies in industry have increasingly come to realize the need for skilled professionals in the management of technical projects and programs [1,2]. For this reason, companies and organizations around the world are increasingly adopting project management as a formal career path. As a result, the career and professional development needs of industry professionals are rising proportionally. This thirst for project management talent and good managers in general is prompting colleges and universities to develop traditional, hybrid, and online programs to meet the rising demand. Evidence of this growth can be found in the number of accredited project management degree programs available globally [3]. This demand for project management talent and education is true in South Carolina and especially in the Charleston area with the rapid growth of manufacturing, engineering, and defense related industries.

The State of South Carolina has three ABET accredited colleges/universities that offer degrees in Engineering. These institutions are located in the three most populated areas of the state, with the corresponding needs for graduates with science, technology, engineering and mathematics (STEM) degrees. The Citadel is located in Charleston, in the southeastern part of the state. The University of South Carolina (USC) is located in the middle of the state, and within walking distance of the state capital building. Clemson University is located the northwestern part of the state, in Clemson, near Greenville, South Carolina. The Greenville area is important because it has traditionally been home for much of the manufacturing activities in the state. USC and Clemson are large research universities and offer opportunities for full-time students and local residents to pursue advanced degrees in Engineering or related fields. The Citadel is a four-year Military College located in Charleston, South Carolina, and until recently has not offered graduate courses or a master's degree program under the School of Engineering.

A Successful Case Study for a Project Management Program

This paper documents The Citadel as a successful case study for developing a project management degree program housed in a School of Engineering. The research problem was how to develop and institute a graduate level program within the School of Engineering with a strong emphasis on traditional strengths of leadership and management education. The program to be developed needed to be non-traditional in order to accommodate working professionals, appeal to a wide variety of educational backgrounds, and yet be sufficiently rigorous to be properly located in the School of Engineering.

In 2005, The Citadel reorganized the College from sixteen (16) independent Academic Departments reporting to the Provost into a more structured hierarchy of five (5) Schools with representative Departments. This change was made to streamline and focus academic, financial, and development lines of communication and responsibility. Dr. Dennis Fallon became the first Dean of the newly formed Citadel School of Engineering (SOE). The SOE consisted of the Department of Civil and Environmental Engineering (CEE) and Department of Electrical and Computer Engineering (ECE), and did not offer a graduate program or graduate courses. In his first month as Dean, Dr. Fallon was visited by three different community groups. Each group

stressed the need for a master's degree level program based in the School of Engineering to provide Charleston area working professionals the opportunity for continued education and professional advancement. Previously both CEE and ECE Departments had attempted to stand up master's degree programs, but these efforts were unsuccessful for a variety of reasons.

In response to the community requests Dean Fallon asked Dr. Keith Plemmons, a CEE faculty member, to consider turning his Project Management Professional (PMP) workshops for industry professionals into graduate courses. The goal was to address an expressed need for advanced project management education and training within a multi-disciplinary context.

Initially, Dr. Plemmons drafted a series of four courses that included an overview of project management course, augmented with three courses oriented toward specific knowledge areas. The courses were based on the Project Management Body of Knowledge (PMBOK), as established by Project Management Institute [4], and were to become a 12 credit hour, graduate certificate program in Technical Project Management (TPM). Several meetings with industry advisors were conducted to ensure the course of instruction provided the professional and career development content desired by senior executives and hiring managers. As the courses moved through a collaborative development process, the industry professionals were asked to review and comment on the course objectives, modules, and textbooks. With industry input and strong commitment from local executives, the four course series was finalized and developed into 3-credit hour courses as a graduate certificate in Technical Project Management. The four courses were:

- PMGT 650: Overview of Technical Project Management
- PMGT 651: Technical Project Planning and Scheduling
- PMGT 652: Applications of Quality Management
- PMGT 653: Technical Project Support and Operations.

Initial Offerings and Growth of the Program

The TPM Graduate Certificate was approved by The Citadel Graduate College in Spring 2006, with the first course to begin in August, 2006. The objectives of this program were to “1) deliver a knowledge and performance-based course of study focused on the knowledge, skills, and abilities needed to manage and deliver technical projects, 2) provide advanced professional development education and training opportunities for experienced professionals, and 3) support other academic programs in the education and training of their students” [5]. Since Dr. Plemmons was the only faculty member qualified and available to teach the TPM courses, only one course was offered per semester for the next two years. The first TPM cohort graduated in May of 2008 with 4 students.

Classes and student growth continued, but progress was limited due to Dr. Plemmons' primary teaching duties in Civil and Environmental Engineering. In August 2008, Dr. Charles Skipper joined the program as Adjunct Faculty. The additional manpower enabled the four TPM classes to be offered in one academic year; two courses in the fall and two courses in the spring. This approach was very successful and continued to generate momentum and increased enrollment.

Based on the steady growth and positive feedback from both students and employers, a second working group was established with senior industry representatives to structure what a Master's Degree in Project Management would look like, and be widely supportable. Two formal meetings were held with local industry leaders, with numerous informal meetings. The participation at these meetings ranged from 15 to 25 participants from a broad spectrum of industry sectors. With eager support from the community, a 10-course program was proposed and approval was obtained from The South Carolina Commission on Higher Education (CHE) to establish a Master's of Science Degree in Project Management. The 10-course, interdisciplinary program was approved, and activated in January 2010 to provide "*the management knowledge and performance competencies which can be used by graduates from all disciplines involved in managing technical projects*" [6].

In January, 2010 the program took two significant steps forward - Dr. Plemmons was asked to be the first Director of Graduate and Professional Studies in the SOE, and Dr. Skipper joined the faculty full time in January as the Visiting Professor of Engineering Leadership. Student enrollment continued to increase and by May 2011, the first 10 students graduated with their Masters of Science Degree in Project Management. To further meet the needs of students and the Charleston business community, approval was obtained from The Citadel Graduate College for additional courses to be offered. A large step forward occurred starting in August 2011, when all four TPM courses were offered each semester, some with multiple sections.

In January 2012 Dr. Plemmons stepped down as Director of Graduate and Professional Studies, and Dr. Skipper assumed the program leadership responsibilities of marketing, recruiting, course development, and operations. In Academic Year 2011-2012, the program continued to grow, reaching 180 course enrollments across the fall, spring and summer semesters. A second graduating class of 16 students completed their studies in May 2012. Students and employers continued to find great value in this program resulting in 285 enrollments in AY 2012-2013 and 27 MSPM graduates in May 2013.

At this time, The Citadel's Master of Science in Project Management (MSPM) is the only such program in the State of South Carolina. In recognition of the continued growth of this unique program, and to provide a clear path for future development of related courses and programs at The Graduate and Undergraduate level, The Citadel has established a new Department in the School of Engineering [7]. The Department of Engineering Leadership and Program Management was established on 1 January, 2013, with Dr. Skipper as the inaugural Chairman.

The Value of Assessment

The Technical Project Management courses and program have undergone continuing assessment which has been beneficial to the growth and development of new courses, as well as the refining of existing courses.

- As is standard policy at The Citadel, each undergraduate and graduate course is assessed anonymously by the students. Professors get valuable insight into the effectiveness of their teaching methodology, as well as gaining comments regarding additional subject matter that should be covered in existing or new courses, or subject matter to be de-emphasized. Through this feedback mechanism, it was apparent that students wanted

leadership courses taught in the context of technical project management, instead of the context of Business Administration through the available MBA Leadership Courses. Based on these comments, and with input from students and employers on subject matter, PMGT 671: Project Manager Leadership Development and PMGT 672: Applied Leadership Concepts; were developed.

- A need was also identified by students and employers for addition of Systems Engineering Management courses to the program. Working with the Charleston Lowcountry Chapter of the International Council on Systems Engineering (INCOSE), a separate and highly focused four-course Graduate Certificate in Systems Engineering Management (SEM) was developed. This certificate program was submitted to and approved by the South Carolina Commission on Higher Education (CHE). The SEM Certificate is based on INCOSE standards and focuses on the management of technology-based projects and professionals. The courses that were developed are as follows:
 - PMGT 680: Systems Engineering Management Fundamentals
 - PMGT 681: Requirements Development and Management
 - PMGT 682: Systems Verification and Validation
 - PMGT 683: Systems Modeling and Integration
 - PMGT 684: Human Systems Integration
 - PMGT 685: Decision and Risk Analysis
- Students also expressed a need on their course evaluations for higher level knowledge related to Program Management, as well as on matters related to Contracts and Legal Issues. This same need was also stressed by members of the School of Engineering Advisory Board. Based on this feedback, two new courses were developed. PMGT 660: Introduction to Technical Program Management was based on the latest version of Project Management Institute's "The Standard for Program Management [8]. PMGT 661: Program Contracts and Legal Issues was developed based on the unique legal requirements for technical professionals, to include concepts related to the legal relationships between the Client, Prime Contractor and Design Professional; negligence, licensing and liability. These courses quickly became popular with the students, and have contributed to steady enrollment growth of the program.
- A requirement to learn Microsoft Project was voiced by students in their course evaluations. This requirement was also expressed by employers in the surveys discussed below. Based on this requirement, Microsoft Project software was obtained and instruction has been emphasized in PMGT 651: Technical Project Planning and Scheduling. This course is now offered in computer labs to facilitate learning and applying this software.
- Another valuable contribution from assessment came as we prepared for the Southern Association of Colleges and Schools (SACS) Accreditation visit. In preparation for this visit, and as a way of continuing the maturity of the new Master's Degree Program, surveys were sent to the graduates of the first (and only) two graduating classes in the summer of 2012. The first MSPM graduating class (2011) was requested to complete an Alumni Survey and to have their supervisor complete an Employer Survey. The class of

2012 was asked to complete an Exit Survey. A sample survey (Employer Survey) is available at the end of this article as Appendix A. The 3 surveys are very similar in format, and the first 7 questions are almost verbatim; simply changing the wording to accommodate an employer response or a student/alumni response. The achievement of the Project Management Institute (PMI) Global Accreditation Center (GAC) [9] accreditation is a mid-term goal of the program. We anticipated that using GAC learning objectives for assessment would be beneficial in multiple ways. Therefore, the first 7 questions on each survey were based on the core learning objectives of GAC. The last 2 questions were more broad based and solicited responses regarding how to improve the program, and how successful the graduates are when compared to their peers.

- The results of the 2012 surveys are reported below in Table 1. The results of the 2013 surveys are shown in Table 2. Although the sample size is too small for a detailed statistical analysis, the responses serve to validate the overall trajectory of the program, as well as the continued satisfaction of the graduates and employers. Of note is that the scores assigned on employer evaluations are very similar to the self-evaluation scores made by the students. Also of note are the highest scores provided by employers on both surveys were in the area of integrity, professionalism and ethics. This is in keeping with The Citadel’s longstanding focus on producing principled leaders [10].

Table 1: Responses to 2012 MSPM Employer, Alumni and Exit Surveys

Question	Class of 2011 Employer Survey N=8	Class of 2011 Alumni Survey N=9	Class of 2012 Exit Survey N=7	Average
Apply proper methods for project selection & initiation	4.4	4.4	4.8	4.6
Analyze conditions & prepare formal Project plan	4.3	4.7	4.6	4.5
Takes responsibility to lead, manage, and communicate	4.5	4.6	4.57	4.5
Obtains acceptance of deliverables and closes project	4.1	4.2	4.1	4.2
Consistently demonstrates integrity, professionalism, ethics	4.6	4.9	4.8	4.8
Effective oral, written, and personal communications	4.5	4.6	4.6	4.5
Demonstrates well developed leadership skills	4.4	4.7	4.7	4.6
Average	4.4	4.6	4.6	4.5

Table 2: Responses to 2013 MSPM Employer, Alumni and Exit Surveys

Question	Class of 2012 Employer Survey N=9	Class of 2013 Alumni Survey N=12	Class of 2013 Exit Survey N=25	Average
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Apply proper methods for project selection & initiation	4.5	4.3	4.6	4.5
Analyze conditions & prepare formal Project plan	4.6	4.6	4.7	4.6
Takes responsibility to lead, manage, and communicate	4.8	4.8	4.8	4.8
Obtains acceptance of deliverables and closes project	4.7	4.3	4.6	4.5
Consistently demonstrates integrity, professionalism, ethics	5.0	4.8	4.9	4.9
Effective oral, written, and personal communications	4.8	4.6	4.8	4.7
Demonstrates well developed leadership skills	4.6	4.6	4.7	4.6
Average	4.7	4.6	4.7	4.7

Achievements to Date

To date, the program has grown to include a four-course Graduate Certificate in Technical Project Management (TPM), a four-course Graduate Certificate in Systems Engineering Management (SEM), and a Master of Science in Project Management (MSPM). As stated earlier, all these programs are cited as supporting workforce development in the region, as well as needs of individual professionals for personal advancement and professional development. Table 3 below illustrates the growth of each program over the past four years. It is interesting to note that the rapid growth has occurred despite the absence of a formal advertising budget. Our biggest advertisement has been, and continues to be, satisfied students and employers.

Table 3: Project Management Program Graduates

Program	AY 2010	AY 2011	AY 2012	AY 2013
TPM	10	16	23	29
SEM	0	0	3	5
MSPM	0	10	16	27

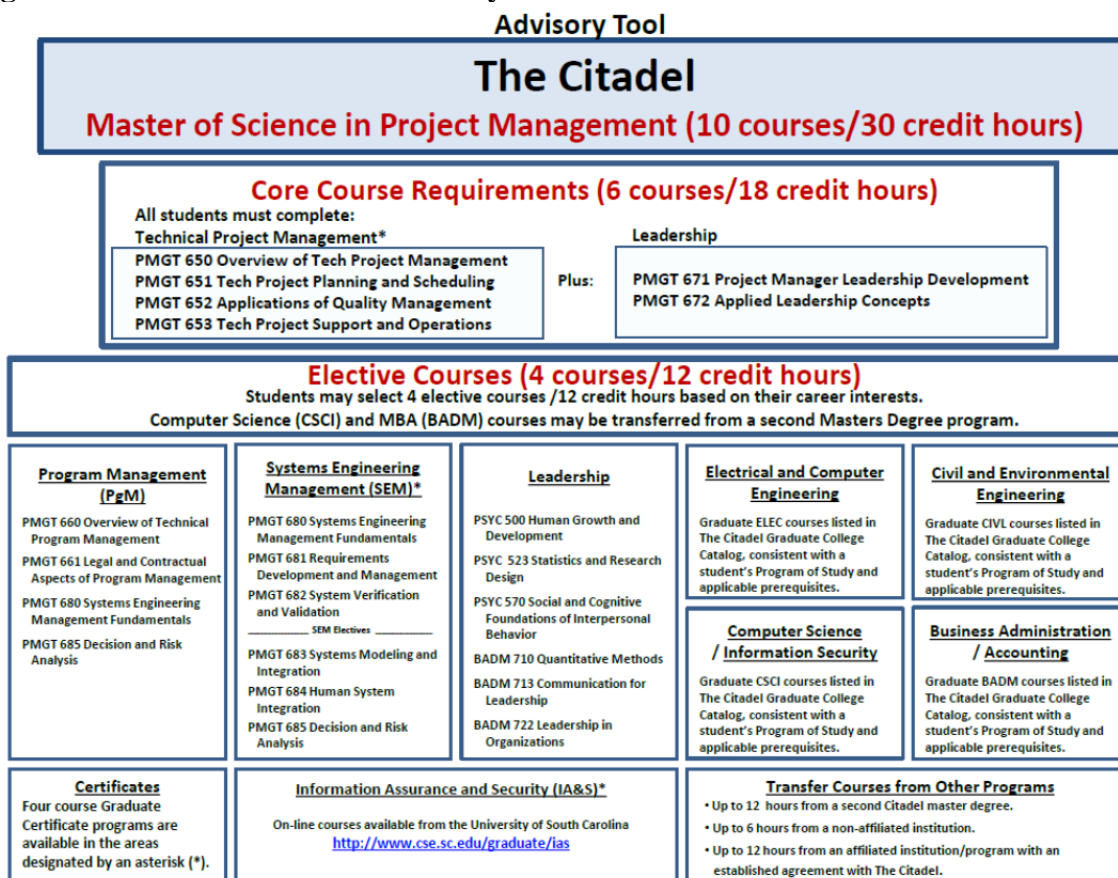
Although not the main intent of these academic programs, students are well prepared to pass the Project Management Institute (PMI) examination to become a Certified Project Management Professional (PMP). This globally recognized credential requires 4000 hours of specific project management practice, a minimum of 35 contact hours of academic instruction, and satisfactory scoring on a rigorous 4-hour examination. The pass rates for those students who have taken this examination are provided in Table 4.

Table 4: Project Management Professionals

Graduating MSPM Class	# of MSPM Grads	# Taken PMP Exam	# Passed PMP Exam	% Took PMP Exam	% Passed who Took Exam
2011	10	6	6	60%	100%
2012	16	9	8	56%	89%
2013	27	8	8	30%	100%

From a benchmark of four courses, offered at a rate of a single course per semester, The Citadel’s project management program now regularly offers fifteen courses, with 10 separate courses per semester and 14 separate courses annually. The growth has been steady, and expectations are that growth will continue. In keeping with The Citadel’s philosophy of an appropriate student/teacher ratio, multiple sections are offered to maintain class size with a maximum of 20 students. The MSPM Advisory Tool, summarizing the program, is shown below in Figure 1.

Figure 1: The Citadel MSPM Advisory Tool



R12A_Effective 1Aug2013 Note: The Citadel MSPM degree program is offered under The Citadel School of Engineering for the professional and career development of both engineers and non-engineers.

The Path Forward

Although The Citadel’s Project Management program has been successful from the start, we are aware that there are many challenges ahead to maintain quality, as well as growth. Those challenges can be expressed in several areas:

- **New Programs.** Course evaluations and informal input from students and industry indicate there appears to be growing demand for more courses in the area of Technical **Program** Management. Certainly the continued growth of manufacturing and defense and other industry in the Charleston area puts a premium on effective Program, as well as Project, Management. Plans are underway, to develop a four course graduate certificate in Technical Program Management. Another area getting a lot of attention is Cyber. Not only does the nation need more competent technical cyber personnel, but also needed are effective managers for these cyber warriors. We are currently exploring ways to offer a blending of our established Project Management and Leadership expertise with Cyber Management to develop courses for the leaders and managers of this new, growing, and important field. The Citadel has traditionally developed military and civilian personnel who serve the nation's defense, and cyber education will certainly be supported.
- **Global Accreditation Center (GAC) Accreditation.** As mentioned earlier, we intend to pursue The PMI GAC Accreditation in the mid-term. We believe that attaining GAC Accreditation will encourage us to continue to strive for excellence in our courses and program. However, it will also offer a clear program distinction for students who are considering applying for a Master's of Science in Project Management.
- **On-Line Offerings.** At present, our courses are 100% traditional instruction; face to face. Many of our students have specifically selected this program, instead of pursuing one of the many on-line MSPM programs, because of the traditional instruction methods. The opportunity for case study discussions, oral presentations in front of their peers, as well as a personal relationship with their professors and fellow students, are all seen as real value added in their educational pursuit. The bond of the graduates is also strong, as evidenced by the many social events that are scheduled informally. Despite all this, there is certainly the opportunity to offer some of, if not all, the project management courses on-line. As the only MSPM in the State of South Carolina, and one that is clearly interdisciplinary and willing to accommodate a variety of educational backgrounds in our students, interest has been expressed by several employers in other geographic areas throughout the state, particularly in Columbia and Greenville. Going on-line is perhaps an inevitable next step, but one that we will not pursue until our growth in this geographic region has leveled off and we have achieved GAC accreditation. To date our program is unique and successful, and continuing that is more important to the faculty than unprepared for rapid growth. The opportunity to utilize lecture-capture technology currently being used for our students, who must occasionally miss classes due to work demands will enable this next step.
- **New Academic Partners.** In keeping with our interdisciplinary spirit, we allow our students to transfer two courses (6 credit hours) from other institutions. We also allow them to transfer up to four courses (12 credit hours) from other Citadel graduate programs or other academic institutions with which we have formal established agreements. The addition of more agreements will allow our students to benefit from specific courses that may not be available at The Citadel. These agreements will also enable students from other colleges and universities to benefit from The Citadel's traditional strengths of leadership and management education. The overall intent is to

offer a wide variety of subject matter expertise from programs at a variety of institutions to best address the career and professional development needs of students.

Best Practices

Over the short years of operation, a spectrum of ideas were considered and implemented in an effort to improve and grow the MSPM degree program and its TPM and SEM graduate certificates. Some ideas did not produce the desired results and were quickly discarded. For example, advertising in narrowly read trade publication and using stock photos were not considered beneficial. The ideas that were beneficial survived and constitute a body of best practices. Some of these best practices are summarized below:

- A graduation dinner is held each May and December for the MSPM, TPM, and SEM graduates. The dinner brings the graduates together to commemorate the hours of hard work and study and to celebrate with family and faculty. To mark the event, a distinguished speaker provides a presentation that attempts to place their achievements in a business or career positive perspective.
- Poster presentations are required by TPM graduates to present their Capstone project at the graduation dinner. For about one and a half hours, prior to the graduation dinner, the students make poster presentations to friends, faculty, and distinguished guests. Each student makes his/her presentation from the perspective of having recently completed the project, thereby giving the listener the opportunity to understand the finished project and to ask pertinent questions. These poster presentations and dinner are considered to be the highlight of the program and helps build confidence and bring closure to their academic accomplishments.
- Marketing materials and advertisements are given to the students each semester. The students post these materials in their workplace (break areas, common areas, etc.), and as a result become conversation starters and help advertise the program within their organization.
- Student testimonials are recorded shortly before graduation. As sampling of these testimonials are placed on the MSPM website and have proven useful in putting a “face and a voice” to the diversity and capability of our students. Many of the testimonials note the positive impact the program has made on their careers and personal lives.
- Pictures of actual MSPM students and graduates are incorporated into our advertisements and brochures. This practice has made the programs more relevant to interested employers and potential students. For example, when talking about the program, the faculty can identify the people in the pictures by name and note their position and accomplishments.
- The Advisory Tool, shown in Figure 1, is used extensively. The program core and elective course options, along with the graduate certificate programs, are placed on a single page. This enables each person is able to quickly grasp the path to graduation and completion of the MSPM, TPM, and SEM programs.

- Students must select their personal Capstone project. This has proven to be extremely effective for each student's learning experience. The Capstone project is valuable academically and personally and, in some cases, professionally as the student develops an intricate knowledge of what it takes to initiate, and plan a project. A project that interests them, each student's work and presentations form a major element of each of the four core project management courses.
- Only professors and adjuncts with extensive real world experience are employed in this program. Having practitioners in the classroom enable our students to connect well with the course material and their instructors. Students have responded well to the practical experience and professionalism of the faculty.
- Faculty routinely participate in applicable conferences and local professional events and trade shows. This involvement has helped expose the programs to a broad spectrum of employers and potential students. This exposure has helped advertise the program through personal contact and word of mouth, and enable students and employers to know about and understand the program via a simple and direct presentation.
- Student and employer input are constantly used to improve the program. For example, based on student and employer feedback, Microsoft Project scheduling software was placed on all classroom and computer laboratory computers and used extensively on student projects and classroom demonstrations. Also, the four core project management courses utilize the same set of primary textbooks, thereby saving students a significant amount of money and enabling the faculty to coordinate and collaborate on course content.

Implications

Although funding is currently very tight for academic institutions, there is a path to grow new programs and establish new departments that align with the needs and interests of students and employers. The Citadel's MSPM and the Department of Engineering Leadership and Program Management were built with one tenured faculty member, one visiting professor, and liberal use of highly qualified Adjunct Faculty. Rather than being innovative, the extensive use of Adjunct Faculty is really a return to the past when experienced practitioners taught college students the realities of technical problems they encountered in the workforce.

At a time when there is tremendous pressure towards on-line education, the MSPM and associated Certificate Programs have been built with 100 % face to face instruction. In fact, this type of instruction is frequently cited by students as a significant reason for their enrollment. There appears to be a substantial segment of the student population that places great value on interaction with their peers and a face-to-face relationship with their professor.

Currently the MSPM degree program is only offered as evening courses and is designed to accommodate working professionals. The non-traditional aspect of this program addresses the needs of students who are unable to leave full-time employment in order to further their academic pursuits. Recognizing the value of this program, most of our student's employers fund their academic programs as a means for investing in their employees and improving their workplace productivity.

As a Master of Science degree instead of a Master of Engineering degree, non-engineers are encouraged to enroll in the program. The interdisciplinary nature of the students and the courses offered as electives has resulted in a challenging and multifaceted learning environment that more closely replicates the work environment. The MSPM program is increasingly cited as serving the economic development needs of the region, and the interdisciplinary make-up of the students is a big reason why.

Lastly, the importance of champions cannot be over emphasized. This degree program exists today because the right people were in the right place at the right time and displayed tremendous initiative and foresight. They individually and collectively overcame bureaucracy, limited resources, and institutional obstacles.

Nuggets

Below are sample responses to alumni surveys:

- *“I feel confident that I have the knowledge to take a project that my boss assigns to me and complete it from start to finish.”*
- *“In my small company, I am the only one with a professional certification in project management. I know it was a major factor in landing my project manager job.”*
- *“It has given me a wealth of information and opened the doors that I did not even know were there.”*
- *“The confidence level that I have developed and taken away from this program has allowed me to excel among my peers.”*
- *“I enjoyed every class and especially enjoyed those that helped me understand myself better.”*
- *“I now understand why it is important to have well defined and detailed requirements. My peers at work have not had the same exposure to project management that I have had, so I feel that I am a greater asset to my company.”*
- *“I have already been presented with advancement opportunities and training in specialized areas that peers do not have available because of MSPM education/degree.”*
- *“The program enabled me to not only understand why certain things are done in our industry, but also how to do some of those things better.”*
- *“I could not be more thankful for the experience I have gained from this MSPM program.”*
- *“By choosing project management and leadership, my graduate degree stands out from the plethora of MBAs the executives have to choose from.”*

- *“The project, program, and systems engineering management skills, have allowed me to deliver the goods, lead the teams, keep the projects and routine operations on track, better than ever before.”*
- *“My presentation and oral skills are far better than my peers.”*

Below are sample employer responses to employer surveys:

- *“...distinguishes himself by maturity and demonstrated knowledge of project management practices.”*
- *“...understands that management needs to be formal in both communication and documentation, and the importance of both.”*
- *“...is very good at initial meetings, shows evidence of project management skills without being overbearing.”*
- *“...gives people confidence that her project management skills and knowledge will be beneficial to them.”*
- *“...has great communication skills and the ability to be strategic when making decisions.”*
- *“... an excellent orator. I trusted him to present to Boeing’s top management team with President, Vice President, and myself in attendance.”*
- *“... ready from day one, requiring no guidance on what needs to be done to execute the project, only the introduction of company specific processes.”*
- *“... ability to learn and adapt quickly.”*

Conclusions

There continues to be a need for competent leaders and managers who can execute technical projects and programs. As business and manufacturing processes continues to get more sophisticated and technical, the need for professional leaders and managers who can deliver technical projects on budget, on-time, and meet the demands of stakeholders and employers creates a serious educational need. This paper has reported the successful efforts of The Citadel to grow educational programs to address this need in the Charleston Area of South Carolina. The methodology of determining workforce needs, developing appropriate courses/programs, offering the programs and assessing their success, can be replicated elsewhere.

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Appendix A
Citadel MSPM Employer Survey 2013

Employee Name: _____

Please use the provided scale to evaluate your employee: *check or x the box you deem appropriate.*

Questions	[5] Strongly Agree	[4] Agree	[3] Neutral	[2] Disagree	[1] Strongly Disagree
The Citadel's MSPM Program produces Project Management graduates who (demonstrate):					
1. Employee applies proper methods for the selection and initiation of projects.					
2. Employee is able to analyze given conditions to prepare a formal and comprehensive project plan.					
3. Employee takes responsibility to lead personnel, manage resources, and communicate with stakeholders to execute and control a project.					
4. Employee can obtain acceptance of deliverables and complete all financial and administrative documentation (within assigned responsibilities) necessary to close a project.					
5. Employee consistently demonstrates integrity and professionalism while adhering to legal and ethical standards.					
6. Employee has effective oral, written, and personal communication skills.					
7. Employee demonstrates well developed leadership skills to lead and manage project teams.					

8. Please list additional knowledge, skills and abilities that would be desirable for new project management program graduates based on your professional experience.

9. In what ways does this graduate distinguish his/herself from their peers?