

MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

PROPOSAL FOR:

- NEW INSTRUCTIONAL PROGRAM
 SUBSTANTIAL EXPANSION/MAJOR MODIFICATION
 COOPERATIVE DEGREE PROGRAM
 WITHIN EXISTING RESOURCES or REQUIRING NEW RESOURCES

(For each proposed program, attach a separate cover page. For example, two cover pages would accompany a proposal for a degree program and a certificate program.)

Mount St. Mary's University
Institution Submitting Proposal

August 2017
Projected Implementation Date

Post-Bacc. Certificate
Award to be Offered

Quality Assurance and Regulatory Science Certificate
Title of Proposed Program

Suggested HEGIS Code

261201
Suggested CIP Code

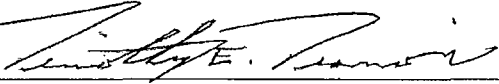
School of Natural Science and Mathematics
Department of Proposed Program

Jeffrey A. Simmons
Name of Department Head

Jennie Hunter-Cevera
Contact Name

hunterce@msmary.edu
Contact E-Mail Address

301-447-5217
Contact Phone Number


Signature and Date

President/Chief Executive Approval

March 20, 2017
Date

Date Endorsed/Approved by Governing Board



February 27, 2017

Mr. Anwer Hasan, Chair
MD Higher Education Commission
6 North Liberty Street
Baltimore, MD 21201

Dear Mr. Hasan:

I am happy to write a letter in support of the attached proposal for a new post-baccalaureate certificate program in Quality Assurance and Regulatory Science at Mount St. Mary's University. This program will fulfill a real need within the regional biotechnology industry and we are proud to be able to provide this service to our community.

The description of library resources in the attached proposal accurately captures the investment Mount St. Mary's University has made in library resources to support our academic programs. The needs of the proposed certificate in Quality Assurance and Regulatory Science are adequately supported by existing library resources. The program is closely related to our existing program in Biotechnology and Management and as such draws on the existing commitments to and investments in library resources.

Likewise, the description of the impact of the proposed certificate in Quality Assurance and Regulatory Science on physical facilities, infrastructure and instructional equipment accurately notes that the needs of the new program can be accommodated with our existing resources. Some of the courses are online and require little infrastructure support while the on-site courses will be held at the Frederick campus where there is unutilized capacity in terms of classroom space and instructional equipment.

We appreciate your support of Mount St. Mary's as we strive to provide high quality and forward-thinking programs that meet the needs of our county and region. We are looking forward to your favorable review of this proposal.

Sincerely,

Timothy E. Trainor, Ph.D.
President

MOUNT ST. MARY'S UNIVERSITY
OFFICE OF THE PRESIDENT

16300 OLD EMMITSBURG ROAD, EMMITSBURG, MARYLAND 21727
301.447.5600 FAX: 301.447.5634 president@msmary.edu



Mount St. Mary's University

Proposal for a New Post-Baccalaureate Certificate Program

Quality Assurance and Regulatory Science

Written by Connie Dudley, Director of Graduate Programs in Science and Jeffrey Simmons, Dean of Natural Science and Mathematics

A. Centrality to Institutional Mission and Planning Priorities

Program Description

The proposed Quality Assurance and Regulatory Science (QA/RS) certificate program is designed for scientists and other professionals in the biotechnology, biopharmaceutical, and related industries who are seeking advanced training and knowledge in the areas of quality assurance, risk assessment, quality control, and regulatory compliance. Because of the large and growing biotechnology presence in Maryland and the immediate four-state region and the increasingly rigorous regulatory requirements for biopharmaceutical and biotechnology product development, there is a strong demand for employees with this expertise.

The program consists of five courses (15 credits) offered at MSMU's Frederick campus. One of the five courses will be offered online, two will be on-site and two will be hybrid. On-site courses will meet one evening per week for eight weeks. Students attending part-time will be able to complete the program in one year.

Relationship of Proposed Program to the University's Mission

The proposed program is designed to be consistent with and to support the University's mission:

Mount St. Mary's is a Catholic university committed to education in the service of truth; we seek to cultivate a community of learners formed by faith, engaged in discovery, and empowered for leadership in the Church, the professions, and the world.

Two hallmarks of MSMU's programs are small class sizes and curricula that integrate ethics and a moral framework into each discipline. Small class sizes and close interaction with professors

foster the development of a “community of learners” who are committed to each other’s success. Quality Assurance and Regulatory Science (QA/RS) is an interdisciplinary field that draws from a number of disciplines, including the sciences, statistics, engineering, economics, business management, ethics, and law, which makes it a good and practical fit for a liberal arts university seeking to further develop its graduate program offerings in the sciences. The goal of the QA/RS profession in biotechnology is to provide leadership to businesses seeking to increase efficiency, minimize waste, enhance worker safety, and improve product quality and reliability. In a larger sense, the QA/RS professional takes a leadership role in improving the health and well-being of consumers by implementing standards that ensure that their safety is of highest priority to the businesses that make the products they rely upon. The proposed program is also designed to empower students to be leaders in their professions, which is in furtherance of our mission statement.

Relationship to Strategic Goals

MSMU is in the midst of developing a new vision and mission under the leadership of our new President, so a comprehensive strategic plan is not currently available. However, the President has developed a list of shared priorities for 2016-17, a few of which are relevant here.

1. Research and develop new undergraduate and graduate programs that meet the current and future needs of students and employers.
2. Create and advance mutually beneficial relationships with local and regional organizations.
3. Increase online learning courses available through programs available at both the Emmitsburg and Frederick campuses.

The proposed graduate certificate program has been tailored to meet the needs of biotechnology and biopharmaceutical companies. Managers from several companies were interviewed to determine the needs they had in terms of graduate programs for their employees and QA/RS consistently emerged as a top priority. The Dean of the School of NSM and the Director of Graduate Programs in Science will continue to solicit feedback from the major biotechnology employers regarding this program to ensure that it remains relevant and is meeting their needs. This will form the basis for an informal partnership between MSMU and industry that could evolve over time into more formal partnerships. The proposed curriculum is designed to accommodate non-traditional, working students and includes online and hybrid course offerings.

B. Adequacy of Curriculum Design and Delivery

Program Requirements

Purpose

The graduate certificate in Quality Assurance and Regulatory Science is designed for biotechnology and biopharmaceutical professionals who are seeking advanced knowledge and

training in the area of quality assurance, quality control, regulatory affairs, and risk assessment. The curriculum will provide graduates with the knowledge and skills needed to improve process and product performance, enhance the quality and reliability of goods and services, and implement steps to make their organizations more efficient.

Admission Requirements

Candidates for admission into the QA/RS program must have completed a bachelor's degree in a science, engineering, or related field and must satisfy at least one of the following criteria:

- 2.75 minimum cumulative undergraduate or graduate grade point average (GPA), or
- 5 full years of relevant, professional experience (résumé required)

International students must also submit a TOEFL score with their application.

Course List (5 courses, 15 credits)

Required Courses (4 courses, 12 credits)

MSQ 5xx Quality Systems and Regulation (3 cr.) - An examination of the history of the development of the FDA, the essential quality systems governing FDA-regulated industries, and the application of quality and ethical practices in the development, manufacturing, control and risk assessment of products in the biotechnology and biopharmaceutical industries. Students learn the principles of QSR (Quality Systems Requirements) as they apply to the procurement of materials and the manufacture, validation and release of products. An introduction to cGMPs (current good manufacturing practices) and other GxP concepts will also be discussed. [On-site]

MSB 5xx Biostatistics (3 cr.) - This applied course introduces students to basic skills in biostatistical methods, including the fundamentals of statistical inference. This course will also be a pre-requisite for the experimental design course in the M.S. in Biotechnology and Management program, so it will serve a dual purpose. [On-site]

MSQ 6xx International Regulation (3 cr.) – This course will introduce key principles in international regulation in the context of responsible global product development, approval, marketing and sales. International regulation will be examined in contrast to current U.S. regulations. [Online]

MSQ 6xx Quality Management (3 cr.) This course is based on the Six Sigma Body of Knowledge (BOK) and is designed, along with the statistics core course requirement, to prepare students to pass the American Society for Quality's Green Belt Exam. Topics include an overview of Six Sigma, Lean principals, design for Six Sigma and the DMAIC technique for process creation and improvement. [Hybrid]

Elective Courses (1 course, 3 credits)

Choose one of the following two options:

MSQ XXX Regulatory Compliance for Biologics and Drugs (3 cr.) – This course examines current policies and guidelines under which pharmaceutical and biological products are responsibly developed for human use, and how they are regulated in commerce. Topics include regulatory requirements for patented and generic pharmaceuticals, over-the-counter drugs, legal and ethical issues, and biological products. This course will also examine harmonization in international regulations. [Hybrid]

MSQ XXX Regulatory Compliance for Medical Devices and Combination Products (3 cr.) – This course examines U.S. medical-device development and approval requirements, including regulatory reforms implemented under the Food and Drug Modernization Act, Clinical Laboratory Improvement Amendments, the Center for Devices and Radiological Health reengineering initiatives, and evolving Investigational Device Exemptions; pre-market Approval; 510(k) application process; responsible product development, ethical protocol development and review processes. The course also explores emerging developments and trends in medical-device regulation in the United States. Topics include legal and ethical issues. [Hybrid]

Educational Objectives and Student Learning Outcomes

The graduate certificate in QA/RS is designed to prepare biotechnology and biopharmaceutical professionals seeking to enhance their knowledge and training in the area of quality assurance, quality control, regulatory affairs, and risk assessment. Completion of the program will provide students with:

- An understanding of applicable FDA standards and processes, international regulations, Good Manufacturing Practices and supporting GxP standards
- A working knowledge of quality systems and quality management
- An understanding of international and U.S. product-specific industry and regulatory standards
- Improved writing and oral communication skills
- A foundation for ethical decision-making

Discuss how general education requirements will be met, if applicable.

Not applicable.

Specialized accreditation or graduate certification requirements

Not applicable, however students who take the Quality Management course will be prepared to take the ASQ's Green Belt certification exam; obtaining such certification is not a requirement.

Contracting with another institution or organization

Not applicable.

C. Critical and compelling need as identified in the 2013 State Plan

The proposed program meets several of the critical needs identified in the 2013 Maryland State Plan for Post-Secondary Education (hereafter, State Plan). The State Plan focuses on seven goals that the state will be addressing during the current decade. The QA/RS program will contribute directly to four of the seven goals.

- ❖ **Quality and Effectiveness Goal** – The proposed program will undergo a continuous assessment and response process in which the courses, learning goals, and program outcomes will be evaluated on an ongoing basis according to a formal assessment plan. The assessment results will be reviewed and used to inform the changes to the next iteration of the course or program, thereby creating a process of continuous improvement. Furthermore, we have assembled a very strong core group of faculty who have decades of experience in QA/RS fields or related fields and are accomplished instructors. Funding has been included in the budget for professional development for the faculty such as teaching workshops.

- ❖ **Access, Affordability and Completion Goal** – The proposed program includes online courses, hybrid courses, and evening and accelerated formats for working adults. The program has been designed to be convenient and accessible for the non-traditional, working adult student who is our target population. The MSMU graduate program faculty and staff have been working with this population of students for years and from that experience we know that they strongly prefer evening courses as well as the flexibility of online/hybrid courses. Affordability is also a key factor for successful recruitment. The cost per credit hour for graduate programs in science (\$610 in 2016-17) is in the middle of the range for comparable biology graduate programs in the state (see the table below).

| Inst. | Course/Program | Per Credit Hour |
|-----------------------------|--------------------------------------|---|
| Hood | Biomedical Science | \$475 |
| UM University College | Biotechnology Management (online) | \$458 for Maryland residents, \$659 for out of state residents. |
| UM Baltimore County | Molecular and Cell Biology | \$603 for Maryland Residents, \$997 for out of state residents |
| MSMU | QA/RS | \$610 |
| UM College Park | Cell Bio & Molecular Genetics | \$651 for Maryland residents, \$1,404 for out of state residents |
| Johns Hopkins | Biochemistry & Molecular Biology | \$1,358 |
| Johns Hopkins | Biotechnology | \$1,358 |

- ❖ Innovation Goal – Our proposed program is an innovative program in several respects, not the least of which is the novelty of the program itself which will be unique in the state and the region. The hybrid format of two courses is somewhat unusual for technical courses but it will be appreciated by the working professional because they will be able to do coursework at times and locations that are most convenient for them. This also increases the accessibility of the program for working professionals. Finally, technological innovation will be incorporated into all courses in the curriculum through, for example, the use of Canvas® as the learning management system, utilization of statistical software, and learning about the leading advancements in biologics and medical devices.
- ❖ Economic Growth and Vitality Goal – According to the State Plan,

“Maryland’s postsecondary institutions must continue to innovate and collaborate with private industry, nonprofits, and each other so that 1) graduates’ education and training align with business and workforce prerequisites and emerging needs, ...” (p. 40)

As indicated in the following section, there is a strong emerging need within the biotechnology industry for experienced scientists and managers who understand the principles and processes associated with quality assurance as well as the regulatory framework within which their company functions. The proposed program will provide training and certification for these essential professionals which will increase the efficiency of Maryland companies and improve the quality of their products.

The State Plan goes on to emphasize,

“...a need for more people in the workforce with recognized credentials.” (p.40)

The proposed curriculum was designed to reflect industry standards and aligns closely with the American Society for Quality's (ASQ) guidelines. Furthermore, one of the courses incorporates Six Sigma principles which are widely utilized in the business world. Therefore, in addition to obtaining a post-baccalaureate certificate in QA/RS, graduates will be well-prepared to successfully complete either the Lean Six Sigma green belt exam, the ASQ certification exam or both.

D. Quantifiable Evidence of Market Supply & Demand

Because this is a somewhat specialized field, national sources of data like the Bureau of Labor Statistics are of limited utility, as they do not list information at a meaningful level of detail. BLS lists approximately 496,000 jobs nationwide for Quality Control Inspectors, and 257,000 jobs for Compliance Officers, but these categories include a wide range of manufacturing industries from cars to plastics. However, a snapshot of the demand for Quality Assurance and Regulatory Science professionals can be seen in a local job search (Indeed.com). A search for “quality assurance life science” showed over 450 positions (October, 2016) open within a fifty mile radius of Frederick, Maryland. The MD DLLR estimates that there were 4,448 quality inspectors (across all manufacturing industries) in 2014 and this sector is projected to grow by 11% by 2024. Similarly, the state estimates 7,324 compliance officers employed by industry with a projected growth of 16% by 2024 (Maryland Occupational Projections: 2014-2024, Workforce Information and Performance; <http://www.dllr.state.md.us/>).

Because of the centrality of government regulations and the need to produce the highest quality product in a competitive market with the greatest efficiency, every biotechnology/biopharmaceutical company with more than a few employees has QA/RS professionals on staff. In Maryland there are over 500 biotechnology companies, so there is a substantial demand in the state. As regulations become more abundant and encompassing, the need for QA/RS professionals becomes more acute.

Key personnel at five medium to large biotech companies were interviewed during 2015 and 2016 about their educational and training needs. Each one cited Quality Assurance managers as the greatest hiring need within their science and R&D divisions. All five companies affirmed that it was a challenge to find and hire or train QA/RS managers.

Educational and Training Needs

Despite the high demand for employees with a degree or certification in QA/RS, there are limited educational options available within the state. As detailed in section E below, there are no comparable certificate programs within Maryland. Currently, anyone interested in becoming credentialed in QA/RS would have to sign up for a two-year Master's degree in Regulatory

Science at JHU or UMBC, enroll at Temple University in Philadelphia or enroll in a fully-online certificate program. These options may not be attractive or possible for individuals seeking a competitively-priced, on-site, conveniently-located program where they will interact directly with faculty and peers.

U.S. Census Bureau data for Frederick County shows a large segment of Frederick County residents 18-years of age or older who are enrolled in college or graduate school (19,770 or 11%). Furthermore, about 23% (13,000) of the over-25 population in Frederick County have Bachelor degrees and potentially could be interested in pursuing a graduate degree (*Frederick County Higher Education Needs Assessment*, MGT of America, Inc. 2014)

One way to estimate potential students is to use Temple University's program as an example for estimating demand. The QA/RS Master's program at Temple enrolls 180 students on average each year, most of whom, we might assume, come from Philadelphia or the surrounding counties (population of 6.07 million). In comparison, the population of Frederick County and its five surrounding counties (2.25 million) is about 37% of the greater Philadelphia area population. Therefore, a rough projection for the sustainable size of our program would be 37% of 180, which is 67 students. Even if this estimate is off by as much as 50%, an enrollment within that range would certainly make the program cost effective.

We anticipate that there will be internal demand for the program as well from graduate students in our M.S. in Biotechnology and Management program. The QA/RS certificate will complement the M.S. degree by adding an additional set of skills and knowledge that will help scientists develop their leadership and managerial capabilities.

E. Reasonableness of Program Duplication

In Maryland, there are no Bachelor's or Master's degree programs nor any post-baccalaureate certificate programs in Quality Assurance and Regulatory Science and, consequently, none that focus on the biotechnology industry. Some certificate programs are offered by universities outside of the region in online-only formats. The closest program for Maryland scientists and managers who wish to obtain an on-site Master's degree is Temple University in Philadelphia.

According to data from the Maryland Higher Education Commission, there are three lower-division certificate programs for Quality Assurance/Management in the State plus one post-baccalaureate certificate program in healthcare quality related to patient safety (Johns Hopkins University). Hood College lists a post-baccalaureate certificate in Regulatory Compliance in their catalog; however, the website states that the program is no longer accepting students and is under review (www.hood.edu; accessed 18 December 2016). Both Johns Hopkins and UMBC offer Master's degrees in Regulatory Science that are online almost exclusively (a few of the courses in the JHU program can be taken on-site). These programs contrast with our proposed program which has a significant on-site component, allowing direct personal interaction with classmates and faculty, and, because it is a certificate program, is of shorter duration. Yet the program is tailored to the lifestyle of the working professional to make it convenient and

accessible. In summary, our proposed program is unique in that it is a post-baccalaureate certificate with a mix of on-site and online courses and an emphasis on ethics.

F. Relevance to Historically Black Institutions (HBIs)

1. Potential impact on high-demand programs at HBI's

Not applicable. The proposed program does not duplicate or compete with programs at any of the regional HBIs.

2. Potential impact on the uniqueness and missions of HBIs

Not applicable. The proposed program does not duplicate or compete with programs at any of the regional HBIs.

G. Evidence of the Principles of Good Practice for Online Programs

Not applicable.

H. Adequacy of Faculty Resources

The Director of Graduate Programs in Science shall oversee this new program, and will be responsible for course scheduling, hiring and supervising adjunct faculty/instructors, program evaluation, and continuous improvement.

Both full-time and part-time faculty will teach in the program. Faculty currently committed to teaching in the program include:

Victor Cascella – Mr. Cascella is a business process management professional, and Six Sigma Black Belt. [Part-time adjunct faculty; MSQ 6xx Quality Management]

Jeremiah Kelly, J.D. – Dr. Kelly is an attorney with the U.S. Department of Defense, and is an expert in the area of regulatory law. [Part-time adjunct faculty; MSQ 6xx International Regulation]

Susan Mertins, Ph.D. – Dr. Mertins is a Biosystems and Computational Biology expert, and is formerly a senior research scientist with the National Cancer Institute of the National Institutes of Health. [Full-time Asst. Professor; MSB 5xx Biostatistics]

Paul Smock, M.S. – Mr. Smock is a quality management expert, and consults to large biopharmaceutical enterprises, such as AstraZeneca. [Part-time adjunct faculty; MSQ 5xx Quality Systems and Regulation]

I. Adequacy of Library Resources

Mount St. Mary's University Hugh J. Phillips Library currently contains about 200,000 bound volumes and a rapidly expanding collection of scholarly information databases that provide convenient access to journal articles, e-books and a variety of data sources. Included in our e-library are more than 25,000 professional and scholarly journal publications that are carefully chosen to support each of the University's academic programs. Library resources are more than adequate for this program. Faculty and students in the program will primarily need access to scientific journals that can be found in the existing e-database collection, which includes all the major databases, including the complete JSTOR back files, content from Sage, EBSCO, ProQuest, Duke e-journals, ATLA and many others. These are available from the library's website <http://libguides.msmary.edu/databases>. The library recently implemented the EBSCO Discovery Service that performs a single search of all library resources from one search interface. Requests for additional resources can be made each year.

Our library staff includes four faculty librarians who provide research assistance and information literacy instruction to individuals and groups. Our main desk services, resource acquisitions, cataloging and interlibrary loans are provided by four student/faculty-focused employees, with the help of several dedicated student assistants.

The Phillips Library is a founding member of the Maryland Interlibrary Consortium, and collaborates with Hood College, Baltimore International College, Washington Adventist University (formerly Columbia Union College), Loyola College – Notre Dame University Library, and Stevenson University. Through this consortium, Mount students and faculty have direct access to the collections of each member library through electronic and physical delivery services. The average delivery time for print materials is within 24 hours.

| Table 7. 2015-16 Library Expenditures | |
|--|-----------|
| Volumes | 149,287 |
| Per FTE student | 72 |
| Journal Titles-Paper | 233 |
| Journal Titles-Digital | 26,544 |
| Librarian Research Transactions | 1,068 |
| Participation in Instruction Services | 1,210 |
| Databases | 130 |
| Videos | 1,500 |
| Total Library Expenditures | \$862,061 |
| Library expenditures per FTE student | \$ 413 |

Source: Mount St. Mary's Factbook 2017

J. Adequacy of Facilities, Infrastructure and Instructional Equipment

The QA/RS program will be offered at MSMU's Frederick Campus, a 25,000 ft² facility with classrooms, offices, large conference room, two dining areas, chapel, and kitchen. The facility has some unused capacity in terms of classroom space so it will support the one additional course per term that the QA/RS program will introduce. Although it is a technical major, laboratory facilities are not needed. Faculty instructors have access to the full resources of the facility including photocopiers, scanners, audio-visual equipment, phones, and office supplies. Administrative assistants provide administrative support and faculty also may avail themselves of the resources of the MSMU Career Center, Learning Services, Information Technology Support Center, and Health and Wellness Center. In summary, this program can be offered with existing institutional resources and infrastructure (see the letter of support from the President).

K. Adequacy of Financial Resources

| Resources Categories | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|------------------|------------------|------------------|------------------|------------------|
| 1. Reallocated Funds | \$24,120 | \$24,602 | \$25,094 | \$25,596 | \$26,108 |
| 2. Tuition/Fee Revenue (c+g) | \$91,500 | \$113,094 | \$135,901 | \$149,977 | \$154,476 |
| a. # F.T. Students | | | | | |
| b. Annual Tuition/ Fee Rate (Discounted rate) | | | | | |
| c. Annual Full Time Revenue (a x b) | | | | | |
| d. # Part Time Students | 10 | 12 | 14 | 15 | 15 |
| e. Credit Hour Rate | \$610 | \$628 | \$647 | \$667 | \$687 |
| f. Annual Credit Hours | 15 | 15 | 15 | 15 | 15 |
| g. Total Part Time Revenue (d x e x f) | \$91,500 | \$113,094 | \$135,901 | \$149,977 | \$154,476 |
| 3. Grants, Contracts, & Other External Sources | | | | | |
| 4. Other Sources | | | | | |
| TOTAL (Add 1-4) | \$115,620 | \$137,696 | \$160,996 | \$175,573 | \$180,584 |

Reallocated Funds: The Director of GPS will reallocate a percentage of her time to this new program (for the purposes of confidentiality, the exact percentage is not provided). The amount reflects this reallocation of salary and benefits. The amount is incremented by 2% per year, which is the typical rate of increase of salaries at MSMU.

No. of Part-Time Students: Based on interviews with a sampling of local biotechnology companies, we estimate 2 students per year from each of the two largest of these companies (or other companies like them) and 1 student per year from each of six medium-sized companies. In addition, because there are no other programs in the state like this, and part of the program is online, we expect at least 5 students from outside Frederick and Montgomery counties. This yields 15 students per year. We project slightly fewer during the first three years because the program will be new.

Credit Hour Rate: The rate for 2016-17 is \$610 per credit. We project an increment of 3% per year which is a typical amount of increase at MSMU.

Total Resources: The resources available are projected to be \$115,620 in year 1, increasing to \$180,584 in year 5.

| TABLE 2: EXPENDITURES | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| Expenditure Categories | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| 1. Faculty (b+c below) | \$23,015 | \$23,015 | \$23,015 | \$23,015 | \$23,015 |
| a. # FTE | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| b. Total Salary | | | | | |
| c. Total Benefits | | | | | |
| 2. Admin. Staff (b+c below) | | | | | |
| a. # FTE | | | | | |
| b. Total Salary | | | | | |
| c. Total Benefits | | | | | |
| 3. Support Staff (b+c below) | \$3,350 | \$3,417 | \$3,485 | \$3,555 | \$3,626 |
| a. # FTE | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| b. Total Salary | \$2,500 | \$2,550 | \$2,601 | \$2,653 | \$2,706 |
| c. Total Benefits | \$850 | \$867 | \$884 | \$902 | \$920 |
| 4. Equipment | | | | | |
| 5. Library | | | | | |
| 6. New or Renovated Space | | | | | |
| 7. Other Expenses (see Table 3) | \$10,200 | \$9,700 | \$9,700 | \$9,700 | \$9,700 |
| 8. TOTAL (Add 1 – 7) | \$36,565 | \$36,132 | \$36,200 | \$36,270 | \$36,341 |

Faculty: There are 5 new courses being offered during each academic year and each one will need an instructor. Four of the instructors are adjunct faculty so their salary (@ \$3,600/course) equals \$14,400, whereas the fifth instructor is full-time, so the salary is calculated as 1/7 of the annual salary (because one course is 1/7 of the workload) plus benefits (@ 34%). Fifteen credits of new courses out of a typical 21-hour workload equates to 71% which was used as the "No. of FTE."

Support Staff: We estimate a time commitment equivalent to 5% of a person's workload in the Communications Office for marketing and promotion. A salary of \$50,000 was assumed and benefits are 34% of the salary. The salary was incremented by 2% per year.

Other Expenses: See table 3 below.

| Expenditure Categories | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|--------------------------------|-----------------|----------------|----------------|----------------|----------------|
| Promotional items | \$1,000 | \$500 | \$500 | \$500 | \$500 |
| Printed brochures/flyers | \$200 | \$200 | \$200 | \$200 | \$200 |
| Advertising/Marketing expenses | \$5,000 | \$3,000 | \$3,000 | \$3,000 | \$3,000 |
| Faculty development | | \$2,000 | \$2,000 | \$2,000 | \$2,000 |
| Memberships | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 |
| Conferences/travel | \$1,500 | \$1,500 | \$1,500 | \$1,500 | \$1,500 |
| Networking/outreach | \$1,000 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Subtotal | \$10,200 | \$9,700 | \$9,700 | \$9,700 | \$9,700 |

The "Other Expenses" include operating expenses for the program such as promotional items (pens, lanyards, etc.), printed brochures, and marketing and advertising (such as online advertising). Funds will be available for faculty development of adjunct faculty (e.g., travel to conferences) so that they will remain up-to-date on current practices. The Director of GPS will obtain membership in relevant societies such as the American Society for Quality and will have funds for traveling to conferences. Finally, funds for networking and outreach will enhance recruitment.

Budget Summary: In all five years the available revenue far exceeds the anticipated expenses, so assuming the enrollment targets are met, the proposed program is very cost effective. The number of students that would be needed for the program to just "break even" is two.

L. Adequacy of Provisions for Evaluation of Program

The GPS Director will be responsible for ongoing assessment and continual improvement of the program. Assessment of this program will be integrated with the University's existing assessment program. Each course and faculty will be assessed by administering course evaluations to students and reviewing them annually. Faculty also have access to these evaluations so that they can learn from them and adjust their course accordingly. The GPS Director will also observe the adjunct faculty teaching. Student learning outcomes for the program (Section B.2.) will be assessed through a variety of approaches including student surveys, evaluation of term papers/projects, exit surveys, and pass rate on external certification exams, when applicable (e.g., Six Sigma Green Belt).

M. Consistency with the State's minority student achievement goals

The QA/RS certificate program at MSMU will be promoted along with all the other graduate programs. In 2015-16 the proportion of students of color was 20% in the graduate programs and 30% in the undergraduate programs. Our commitment to diversity is evidenced by a recent S-STEM award from the National Science Foundation that provides scholarship funding for underrepresented students in STEM majors with high financial need.

Nondiscrimination Statement

It is the policy of Mount St. Mary's University not to discriminate on the basis of race, color, national or ethnic origin, political or religious opinion or affiliation, age, sex or handicapping condition in the recruitment or admissions of students, or in the administration of the university's educational policies, admissions policies, scholarship and athletic programs, and other university-administered activities and programs.

Center for Student Diversity

The Center for Student Diversity was established to aid Mount St. Mary's University in its efforts of fostering inclusion, collaboration, and relationship building across campus. The Center provides academic, social, and transitional support in addition to programming, leadership training and inclusive workshops for ALL students and promotes exchange and dialogue between individuals of diverse backgrounds.

The Center for Student Diversity oversees the intercultural development programs, the Horning Fellowship, student support programs (including Third Century Scholars program and the American Indian program), and cultural programs. The office also supports cultural organizations, conducts diversity awareness programs, assesses the needs and climate of diverse groups and advocates on behalf of underrepresented students.

N. Relationship to low productivity programs identified by the Commission

Not applicable. There are no identified low productivity programs at MSMU.