

# Quality Assurance certificates and Associate Degree

## Item 1. Program Goals and Objectives

The Quality Assurance series of Certificates of Achievements are designed to sequentially prepare students for both employment in the Quality Assurance field and cover the Body of Knowledge for Internationally recognized certification exams in the field of quality. We are proposing a series of five Certificates of Achievement which build on each other and follow the Body of Knowledge published by the Certification body, American Society for Quality (ASQ). Upon completion of the series of Certificates the Associate Degree will also be available as a CTE Associate of Science degree

Each Certificate of Achievement will focus on identified knowledge and skills such as inspection and testing methods for processes and products, Continuous Process Improvement tools and techniques, Statistical Process Control, problem solving tools. Each of these skills are used in the field today and provide a strong basis for entry level employment or enhance current employment skills to advance at current employment.

Upon successful completion of each of the five certificates (Quality Assurance Level I, Quality Assurance Level II, Quality Assurance Process Analyst, Quality Assurance Inspector, and Quality Assurance Auditor) students will be able to demonstrate proficiency in; evaluating business performance based on physical observations, analyzing business processes for statistical stability and capability, selection and use of process improvement tools, measurement system analysis, and evaluation of quality systems in relation to national and international standards.

After completion of the Quality Assurance certificates and degree employment possibilities include: Quality Analyst, Quality Associate, Quality Inspector and Quality Technician, Process Control Technician. Each level of the Certificates of Achievement progressively increase the skills and knowledge of the students and parallel the Body of Knowledge for internationally recognized professional certification exams for Certified Quality Inspector, Certified Quality Improvement Associate, Certified Quality Process Analyst, Certified Quality Inspector and Quality Auditor.

## Item 2. Catalog Description

### **Quality Assurance Level I**

#### **Program Description:**

This Level I certificate provides students with the technical knowledge and skills to perform inspection and testing procedures in a production environment. Students will be able to read and interpret industrial drawings, perform mathematical calculations, and determine product

suitability for use. These skills are also transferable to the service sector when employers apply national and international standards of quality service and management.

### **Quality Assurance Level II**

#### **Program Description:**

This Level II certificate adds to the knowledge and skills of the Level I certificate completers enabling them to apply statistical analysis to evaluate and control business processes. Additional analytical tools provide methods for the determination of process capability.

### **Quality Assurance Process Analyst**

#### **Program Description:**

The Quality Assurance Process Analyst solves quality problems and is involved in quality improvement projects in either manufacturing or service industries. Advanced statistical analysis is included to compare and optimize business performance

### **Quality Assurance Inspector**

#### **Program Description:**

This certificate expands on three Quality Assurance certificates by adding the knowledge and skills of Measurement Systems Analysis, inspection systems, traceability, Failure Modes and Effects Analysis, and corrective action. Students should be able to obtain employment as process or product inspectors in manufacturing or service fields.

### **Quality Assurance Auditor**

#### **Program Description:**

This certificate provides the fundamental knowledge of the concepts and conduct of quality auditing. Students will understand the standards and principles of auditing and the techniques of examining, questioning, evaluating and reporting quality system adequacy. The focus is on internationally recognized standards.

## **Item 3. Program Requirements**

The courses for this series of Certificates of Achievement consist of six existing courses and five new courses. Each of the existing courses are part of an existing and complimentary program, which is Operations and Production Management. The Quality Assurance Level I Certificate of Achievement only requires four courses and three of them have been consistently offered for several years which will offer some students a “head start” when working toward this certificate.

|                 | Requirements  | Dept. Name # | Name                              | Units | Sequence   |
|-----------------|---------------|--------------|-----------------------------------|-------|------------|
| <b>Level I</b>  | Required Core | MAG-46       | Contemp. Quality Systems Mag.     | 3     | Y1, Fall   |
|                 | Required Core | MAG-70       | Intro to Organization Development | 3     | Y1, Spring |
|                 | Required Core | MAG-73       | Quality Inspection & Test         | 3     | Y1, Fall   |
|                 | Elective      | MAG-47       | Applied Bus. & Management Ethics  | 3     | Y1, Fall   |
|                 | Elective      | BUS-20       | Business Math                     | 3     | Y1, Fall   |
| <b>Level II</b> | Required Core | MAG-46       | Contemp. Quality Systems Mag.     | 3     | Y1, Fall   |
|                 | Required Core | MAG-70       | Intro to Organization Development | 3     | Y1, Spring |
|                 | Required Core | Mah-73       | Quality Inspection & Test         | 3     | Y1, Fall   |
|                 | Elective      | MAG-47       | Applied Bus. & Management Ethics  | 3     | Y1, Fall   |
|                 | Elective      | BUS-20       | Business Math                     | 3     | Y1, Fall   |
|                 | Required Core | MAG-71       | Intro to Productivity Management  | 3     | Y1, Spring |
|                 | Required Core | MAG-74       | Statistical Process Control       | 3     | Y1, Spring |
| <b>QAPA</b>     | Required Core | MAG-46       | Contemp. Quality Systems Mag.     | 3     | Y1, Fall   |
|                 | Required Core | MAG-70       | Intro to Organization Development | 3     | Y1, Spring |
|                 | Required Core | Mah-73       | Quality Inspection & Test         | 3     | Y1, Fall   |
|                 | Elective      | MAG-47       | Applied Bus. & Management Ethics  | 3     | Y1, Fall   |
|                 | Elective      | BUS-20       | Business Math                     | 3     | Y1, Fall   |
|                 | Required Core | MAG-71       | Intro to Productivity Management  | 3     | Y1, Spring |
|                 | Required Core | MAG-74       | Statistical Process Control       | 3     | Y1, Spring |
|                 | Required Core | MAG-72       | Intro to Quantitative Methods     | 3     | Y2, Fall   |
| <b>QAI</b>      | Required Core | MAG-46       | Contemp. Quality Systems Mag.     | 3     | Y1, Fall   |
|                 | Required Core | MAG-70       | Intro to Organization Development | 3     | Y1, Spring |
|                 | Required Core | Mah-73       | Quality Inspection & Test         | 3     | Y1, Fall   |
|                 | Elective      | MAG-47       | Applied Bus. & Management Ethics  | 3     | Y1, Fall   |
|                 | Elective      | BUS-20       | Business Math                     | 3     | Y1, Fall   |
|                 | Required Core | MAG-71       | Intro to Productivity Management  | 3     | Y1, Spring |
|                 | Required Core | MAG-74       | Statistical Process Control       | 3     | Y1, Spring |
|                 | Required Core | MAG-72       | Intro to Quantitative Methods     | 3     | Y2, Fall   |
|                 | Required Core | MAG-76       | Metrology                         | 3     | Y2, Fall   |
|                 | Required Core | MAG-77       | Problem Solving & Improvement     | 3     | Y2, Spring |
| <b>QAA</b>      | Required Core | MAG-46       | Contemp. Quality Systems Mag.     | 3     | Y1, Fall   |
|                 | Required Core | MAG-70       | Intro to Organization Development | 3     | Y1, Spring |
|                 | Required Core | Mah-73       | Quality Inspection & Test         | 3     | Y1, Fall   |
|                 | Elective      | MAG-47       | Applied Bus. & Management Ethics  | 3     | Y1, Fall   |
|                 | Elective      | BUS-20       | Business Math                     | 3     | Y1, Fall   |
|                 | Required Core | MAG-71       | Intro to Productivity Management  | 3     | Y1, Spring |
|                 | Required Core | MAG-74       | Statistical Process Control       | 3     | Y1, Spring |
|                 | Required Core | MAG-72       | Intro to Quantitative Methods     | 3     | Y2, Fall   |
|                 | Required Core | MAG-76       | Metrology                         | 3     | Y2, Fall   |
|                 | Required Core | MAG-77       | Problem Solving & Improvement     | 3     | Y2, Spring |
|                 | Required Core | MAG-75       | Quality Auditing                  | 3     | Y2, Spring |

## Item 4. Master Planning

A component of the Riverside City College mission is to provide high-quality, affordable education by engaging a diverse community of learners and offering career-technical courses which lead to certificates and degrees. This series of Certificates of Achievement contribute to fulfilling the college mission in several ways. All courses within the certificate foster critical thinking by requiring students to apply and adapt skills, and concepts learned, to tasks encountered in business. The program courses provide students a level of information competency and technological literacy required for entry-level employment in a number of business environments.

The goals and objectives of this program are in alignment with Riverside Community College District's Master Plan Strategic Theme 4, Community Collaboration and Partnership, Goal 1, "Refine and promote programs in Career and Technical Education, Economic Development, and Community Education that improves the competency and competitive capabilities of service area incumbent workers". As mentioned in Item 1 of this proposal, the Quality Assurance certificate programs may be used by students who want to enter the field, change careers or enhance their skills for promotion.

- Need

The Business discipline at Riverside City College has a long history of working with industry advisors to develop and maintain curriculum which is relevant to current industry standards. This series of Quality Assurance Certificates of Achievement has been developed as a direct result of industry requests. The inland region Deputy Sector Navigator asked RCC in 2012-13 to submit a proposal to work with Chaffey College and submit a proposal for TAACCCT which would develop a series of "stackable" certificates and a degree in Quality Assurance. That proposal was funded and this series of certificates is the result.

The past two annual business advisory committee meetings in 2013-14 and 2014-15 have affirmed their support for developing these certificates and degree. The Inland Empire professional association for Quality Assurance professionals is ASQ Chapter 711. We have had frequent communications with the current chapter president and regional director who both support this program development as well as providing guidance and encouragement.

According to the 2014 Employer Needs Survey of Workforce Development Boards, of the top 15 "missing technical skills" Lean / Six Sigma / Process Improvement is reported as number six (6). The U.S. Bureau of Labor Statistics Occupational Outlook Handbook projects a 6% annual growth for Quality Control Inspectors nationwide but an 8% annual increase in California through 2022. In the State of California Employment Development department report of the Top

100 Fastest Growing Occupations in California, 2012 – 2022, Process Control Programmers show a 44% increase in jobs in the next six years.

- **New Facilities**

The college has the facilities and resources to maintain the courses at the level of quality described in this proposal.

- **Program Costs**

The Quality Assurance courses are primarily lecture only courses. Only one of the proposed courses has a laboratory component. The costs of developing that lab are estimated to be about \$20,000.00. These costs are anticipated to be covered by a re-allocation of funding from the TAACCCT grant because the grant funds for computers is no longer needed because the computers were funded through an existing source. All other equipment, technology and infrastructure are currently in place. These costs include funding for faculty compensation, facilities and equipment, software and hardware. The TAACCCT grant will continue to support some faculty release time to teach two classes per term for the next two years, while enrollment builds.

## Item 5. Enrollment and Completer Projections

### Enrollment Data

The most recent enrollment data for existing, required courses at the college is listed in the following table (source: Riverside City College Enrollment Management Dashboard).

| Course ID | Course Title                       | 2013-14         |                   | 2014-15         |                   | Fall 2015 |            |
|-----------|------------------------------------|-----------------|-------------------|-----------------|-------------------|-----------|------------|
|           |                                    | Annual Sections | Annual Enrollment | Annual Sections | Annual Enrollment | Sections  | Enrollment |
| MAG 46    | Contemporary Quality Systems Mgmt  | 0               | 0                 | 1               | 34                | 1         | 35         |
| MAG 47    | Applied Bus & Mgmt Ethics          | 1               | 34                | 2               | 73                | 1         | 38         |
| BUS 20    | Business Math                      | 10              | 382               | 9               | 342               | 4         | 176        |
| MAG 70    | Intro to Orgganization Development | 0               | 0                 | 0               | 0                 | 1         | 36         |
| MAG 71    | Intro to Productivity Management   | 1               | 31                | 0               | 0                 | 0         | 0          |
| MAG 72    | Intro to Quantitative Methods      | 1               | 21                | 0               | 0                 | 0         | 0          |

### Survey

Current labor market information establishes adequate local employment opportunities for program completers. Therefore, an employer survey has not been conducted.

## Item 6. Place of Program in Curriculum/Similar Programs

The proposed programs will not replace any existing state-approved Certificates of Completion currently in the college’s inventory. A number of program courses in the current proposal are a

part of existing locally and state-approved programs. This program is compatible with and complimentary to the existing state approved program of Operations and Production Management at RCC.

### Item 7. Similar Programs at Other Colleges in the Service Area

According to the California Community College inventory of programs, there no similar programs in region 9. One program exists at Cerritos College in Industrial Technology: Quality Assurance (transfer). There are 63 courses related to Quality Assurance found at 25 community colleges in California.

## References

Burning Glass Industries. (March 2015) *Crunched by the Numbers: The Digital Skills Gap in the Workforce*. Retrieved from [http://104.239.176.33/wp-content/uploads/2015/06/Digital\\_Skills\\_Gap.pdf](http://104.239.176.33/wp-content/uploads/2015/06/Digital_Skills_Gap.pdf)

State of California, Employment Development Department Employment Projections, Riverside-San Bernardino County Metropolitan Service Area.  
<http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html>

2014 Employer Needs Survey, Workforce Development Boards,

U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, 2012

State of California, Employment Development Department Top 100 Fastest Growing Occupations in California, 2012 – 2022  
<http://www.labormarketinfo.edd.ca.gov/OccGuides/FastGrowingOcc.aspx>

## Supporting Documentation Labor Market Information and Analysis

### Labor Market Net Job Market and Earning Potential

The Employment Development Department, Labor Market Information for Riverside County establishes adequate demand given projections of nearly 7,000 openings as documented by the state Employment Development Department job opening projections over the next 5 years.

| <b>SOC Code</b> | <b>Job title</b>                                     | <b>Annual Job openings</b> | <b>Median Wage</b> |
|-----------------|--|----------------------------|--------------------|
| 51-9061         | Inspectors, Testers, Sorters, Samplers, and Weighers | 1,460                      | \$17.95            |
| 43-5111         | Weighers, Measurers, Checkers & Samplers             | 530                        | \$12.69            |
| 51-1011         | Production & Operating Supervisor                    | 800                        | \$26.87            |
| 13-1199         | Business Operations Specialist                       | 3,790                      | \$34.95            |
| 113051          | Industrial Production Manager                        | 360                        | \$48.24            |

The occupations related to Quality Assurance go deeply into all forms of manufacturing, but also are a critical part of health services and financial fields. The commission on accreditation of health care providers (hospitals) requires continuous process improvement to be evident in the operation of all medical facilities. The financial system regulators require all financial institutions (Banks and Credit Unions) to follow statistical process control and problem solving to be apparent in lending and operations decisions. Even the ACCJC follows the quality system format of the National Quality Award.

If any manufacture intends to ship products to Europe, ISO 9000 quality management standards must be met. All products sold to any of the aircraft or automobile manufactures must be manufactured to quality standards which are included in this program. Even the recent problem with Chipotle determining the source of contamination of their food products could have been prevented or detected more easily if quality systems were in place.

### Explanation of Employer Relationship

The Business department has kept close contact with local industry employers, especially through the American Society for Quality regional chapter (ASQ #711). We have also established contact with a Deputy Sector Navigator from the San Diego region who is attempting to establish a stronger tie with California Community Colleges and ASQ. Phone conversations,

e-mail contact and pending face-to-face meeting with representatives from all of these stakeholders have taken place.

## List of Advisory Committee Members

Current members of the Advisory Committee include:

- Melody Ortega, Sales Manger, Marriott Hotel
- Frank Rangal, IRS Agent, retired
- Scott McIntire, Vice President Merrill Lynch
- DeeAnne Gunnemann, VP. Human Resources UVP, Inc

Potential members of the Advisory Committee include:

- Ann Riley, VP, Organizational Excellence American Eagle Financial Credit Union
- Jennifer Binkley, Senior VP & Chief Operations Officer Altura Credit Union
- Kevin Sherell, Senior VP, Technology & Six Sigma Black Belt Altura Credit Union

## Recommendations of the Advisory Committee

The advisory committee members unanimously supported the development of the Quality Assurance series of certificates and degree. The concept was presented at their June 6, 2015 meeting and approved by electronic voting on September 2, 2015.

## Regional Consortia Approval

The Regional Consortia reviewed and approved for the first reading at it's November 2015 meeting.



**RCC Business Advisory Committee Meeting**  
**4:00 PM June 16, 2015**  
**Business Education Building Room 206**

**Meeting minutes**

1. 4:00 PM Dr. Pardee called the meeting to order  
Members present: Scott McIntire , Melody Ortega, & DeeAnne Gunnemann,  
Guests present: Chie Ishihara
  
2. Each committee member & guest introduced themselves.
  
3. The meeting minutes of June 11, 2013 were presented and reviewed.  
MSC Ortega / McIntire) Unanimous. It was acknowledged that there was no meeting held for the 2013-14 academic year, so there are no minutes.
  
4. Update on programs  
Dr. Pardee presented the completion data for certificates and degrees for all program areas from years 2009-10 through 2013-14. Discussion followed, including the funding model for community colleges shifting to apportionment income based on completion. The question was asked if the drop in completion from year 2009-10 to 2010-11 was due to the separation into three separate colleges. The answer was unknown.

Committee members asked what we will be doing to improve marketing and attract more students who will become program completers.

**Program discontinuance**

Dr. Pardee reported on the progress of discontinuing the Insurance program indicating that there have never been any completers, as a matter of fact the program was begun about nine years ago and even though courses were offered, none of the offerings ever had a large enough enrollment for the classes to actually be held.

Banking and Finance program discontinuance recommendation. The recognition that only two students have completed the program in the past five years indicates the lack of viability of the program. Dr. Pardee informed the committee that RCC has been offering the two primary courses (BAN 51, Principles of Banking & BAN 52, Consumer Lending) have been offered at least once every two years, and there was full enrollment the need is not strong enough to continue the program.

MSC (Gunnemann / Ortega) to discontinue the two programs, Unanimous

Dr. Pardee reviewed the Pathway to Law program and provided the description from the RCC catalog. Committee members voiced their support for the program but the item was considered an information item so no action was taken.

5. The concepts of becoming an ACBSP (Accreditation Council for Business Schools and Programs) accredited school of business were presented. Dr. Pardee reported that the Preliminary Questionnaire is completed in draft form and hopefully will be submitted this summer to begin the self-study process. Continued support exists from the committee reflecting their unanimous approval at the 2013 advisory committee meeting.

6. The committee was updated on awarding of the TAA grant for Quality Assurance & Cyber Security. Since this is a four-year grant the committee will be updated annually. The committee was given general information about the curriculum being developed to support the ASQ certification exams body of knowledge for CQI, CQIA, CQT, CQPA, & SSYB. Courses and certificate patterns will be developed over the summer, with the intent of obtaining college approval in 2015- 2016

7. Dr. Pardee presented the concept of Community Colleges in California pilot testing the development and offering of Bachelor's degrees. Discussion followed and the committee was supportive of RCC participating and submitting a proposal when the next opportunity to offer a Bachelor's degree in one of the Business areas.

8. From the floor:

Committee members acknowledged their continued support of the Business Program and the efforts being made to expand by becoming ACBSP accredited.

Committee members commented that they still recognize the RCC is doing a great job in the community.

The future of the remodel of the current Physical Science and Life Science buildings into Business / CIS center was discussed, but the advisory committee was informed that the remodel of the two buildings is still on hold due to funding limitations from the state.

9. 4:57 PM Adjournment

PROGRAM OUTLINE OF RECORD  
NEW DEGREE/CERTIFICATES

College: Riverside City  
TOP Code: 095680

### Quality Assurance Level I

#### Program Description:

This Level I certificate provides students with the technical knowledge and skills to perform inspection and testing procedures in a production environment. Students will be able to read and interpret industrial drawings, perform mathematical calculations, and determine product suitability for use. These skills are also transferable to the service sector when employers apply national and international standards of quality service and management.

Certificate program

#### Program Learning Outcomes

- Identify, assess, and evaluate the skills required to work effectively in a team oriented problem solving environment using contemporary quality tools and methods.
- Evaluate products and processes to determine suitability for use in accordance with written standards and specifications.
- Determine business performance based on physical observation, evaluations and calculations.

| Required Courses (12 units total) |  | Units   |
|-----------------------------------|--|---------|
| MAG-46                            | Contemporary Quality Systems Management  | 3 units |
| MAG-70                            | Introduction to Organization Development | 3 units |
| MAG-73                            | Quality Inspection and Test              | 3 units |

Optional courses, select another 3 units from the following:

|        |  |         |
|--------|--|---------|
| MAG-47 | Applied Business and Management Ethics | 3 units |
| BUS-20 | Business Math                          | 3 units |

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### Quality Assurance Level II

#### Program Description:

This Level II certificate adds to the knowledge and skills of the Level I certificate completers enabling them to apply statistical analysis to evaluate and control business processes. Additional analytical tools provide methods for the determination of process capability.

## Certificate Program

### Program Learning Outcomes

- Analyze current business processes and develop statistically valid graphical representations of performance and be able to predict future performance
- Effectively select process improvement tools to analyze current business practices, determine problem areas and establish a plan to improve business performance.

| Required Courses (18 units total) |  | Units   |
|-----------------------------------|--|---------|
| MAG-46                            | Contemporary Quality Systems Management  | 3 units |
| MAG-70                            | Introduction to Organization Development | 3 units |
| MAG-71                            | Introduction to Productivity Management  | 3 units |
| MAG-73                            | Quality Inspection and Test              | 3 units |
| MAG-74                            | Statistical Process Control              | 3 units |

Optional courses, select another 3 units from the following:

|        |  |         |
|--------|--|---------|
| MAG-47 | Applied Business and Management Ethics | 3 units |
| BUS-20 | Business Math                          | 3 units |

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## Quality Assurance Process Analyst

### Program Description:

The Quality Assurance Process Analyst solves quality problems and is involved in quality improvement projects in either manufacturing or service industries. Advanced statistical analysis is included to compare and optimize business performance

## Certificate Program

### Program Learning Outcomes

- Analyze data to describe process performance using descriptive and inferential statistics.
- Evaluate, interpret and follow international standards of quality management systems.

| Required Courses (21 units total) |  | Units   |
|-----------------------------------|--|---------|
| MAG-46                            | Contemporary Quality Systems Management  | 3 units |
| MAG-70                            | Introduction to Organization Development | 3 units |
| MAG-71                            | Introduction to Productivity Management  | 3 units |
| MAG-72                            | Introduction to Quantitative Methods     | 3 units |
| MAG-73                            | Quality Inspection and Test              | 3 units |
| MAG-74                            | Statistical Process Control              | 3 units |

Optional courses, select another 3 units from the following:

|        |  |         |
|--------|--|---------|
| MAG-47 | Applied Business and Management Ethics | 3 units |
| BUS-20 | Business Math                          | 3 units |

## Quality Assurance Inspector

### Program Description:

This certificate expands on three Quality Assurance certificates by adding the knowledge and skills of Measurement Systems Analysis, inspection systems, traceability, Failure Modes and Effects Analysis, and corrective action. Students should be able to obtain employment as process or product inspectors in manufacturing or service fields.

### Certificate Program

#### Program Learning Outcomes

- Perform Measurement System Analysis according to internationally recognized standards to identify sources of measurement error.
- Complete the process improvement cycle for Six Sigma or Lean methodologies.
- Apply corrective and preventative action measures to business processes.

| Required Courses (27 units total) |  | Units   |
|-----------------------------------|--|---------|
| MAG-46                            | Contemporary Quality Systems Management  | 3 units |
| MAG-70                            | Introduction to Organization Development | 3 units |
| MAG-71                            | Introduction to Productivity Management  | 3 units |
| MAG-72                            | Introduction to Quantitative Methods     | 3 units |
| MAG-73                            | Quality Inspection and Test              | 3 units |
| MAG-74                            | Statistical Process Control              | 3 units |
| MAG-76                            | Metrology                                | 3 units |
| MAG-77                            | Problem Solving and Improvement          | 3 units |

Optional courses, select another 3 units from the following:

|        |  |         |
|--------|--|---------|
| MAG-47 | Applied Business and Management Ethics | 3 units |
| BUS-20 | Business Math                          | 3 units |

## Quality Assurance Auditor

### Program Description:

This certificate provides the fundamental knowledge of the concepts and conduct of quality auditing. Students will understand the standards and principles of auditing and the techniques of examining, questioning, evaluating and reporting quality system adequacy. The focus is on internationally recognized standards.

### Program Learning Outcomes

- Properly applying auditing techniques in evaluating process performance, product fitness to improve business performance.
- Design auditing plans to verify and validate quality system performance when compared to existing standards, policies and procedures.
- Develop audit plans capable of assessing business processes and quality systems.

| Required Courses (30 units total) |  | Units   |
|-----------------------------------|--|---------|
| MAG-46                            | Contemporary Quality Systems Management  | 3 units |
| MAG-70                            | Introduction to Organization Development | 3 units |
| MAG-71                            | Introduction to Productivity Management  | 3 units |
| MAG-72                            | Introduction to Quantitative Methods     | 3 units |
| MAG-73                            | Quality Inspection and Test              | 3 units |
| MAG-74                            | Statistical Process Control              | 3 units |
| MAG-76                            | Metrology                                | 3 units |
| MAG-75                            | Quality Auditing                         | 3 units |
| MAG-77                            | Problem Solving and Improvement          | 3 units |

Optional courses, select another 3 units from the following:

|        |  |         |
|--------|--|---------|
| MAG-47 | Applied Business and Management Ethics | 3 units |
| BUS-20 | Business Math                          | 3 units |

### Associate of Science Degree

The Associate of Science Degree in Quality Assurance will be awarded upon completion of the Level I and Level II requirements as well as the requirements for Quality Assurance Process Analyst and Quality Assurance Inspector and the general education requirements as described in the college catalog.