# **QUALITY ASSURANCE**

**College of Natural and Behavioral Sciences** 

### **Program Description**

Quality Assurance is an interdisciplinary profession practiced by management personnel who are responsible for planning and assuring the quality of products and services. The career opportunities in this rapidly growing field are excellent. Quality professionals are members of management teams where their specialized skills promote organizational excellence, reduce wastes, and improve existing processes. The traditional applications of Quality as related to product performance have evolved to most every industry, such as healthcare, finance, hospitality, and non-profits.

The online Master of Science is Quality Assurance (MSQA) degree program is designed to prepare professionals in quality, engineering, science, management, health care, government and service industries for career advancement. Topics covered include Total Quality Management (TQM), Six Sigma, ISO 9000, reliability, benchmarking, process improvement, quality control, human factors in quality assurance, measurement and testing techniques, quality project management, productivity, quality function management, and customer satisfaction.

The degree programs are supported by local members of the ASQ- Global Voice of Quality Organization.

## **Features**

#### Undergraduate

The CSUDH Bachelor of Science in Quality Assurance (BSQA) is designed to develop professionals in the discipline of quality. Quality professionals are members of teams in any profession where their specialized skills promote organizational excellence, reduce waste, and improve existing processes. The term "quality" is not commonly used in the job description or job title. Quality focused activities exist in many job descriptions.

Among the topics studied in the BSQA are; Process Improvement, Process Problem Solving, Risk Assessment, Metrology, Quality Management Methodologies, Technical Communication, Measurement Systems Applications, Quality Auditing, and Quality Product or Service Improvement.

The BSQA program curriculum is designed to develop skills which can be applied to most organizational functions where products and services are developed through structured processes. The BSQA includes a metrology concentration option, which is focused on the various types of measurements and calibration procedures applied in laboratory environments. BSQA graduates are process analysis and process improvement specialists.

The business world today is seeking the job resilient employees who demonstrate:

- · Flexibility, agility, and adaptability
- · Good time management skills
- · Collaborative and efficient team participation
- Effective communications
- · Detailed fact-based analytics acumen
- · Imaginative fact-based problem-solving

The BSQA program of study provides knowledge and practical analytical techniques that apply quality improvement tools and methodologies related to each of these current business needs.

Students will acquire knowledge and skills in the following areas:

- Analyzing a Quality Management System/Organizational Excellence
  Program
- Examining and characterizing a quality management system to reflect the internal culture of an organization
- Illustrating a quality-focused new process development for organizational programs in current organizational programs such as environmental and social governance
- Determining root cause analysis and process improvement for both products and services
- Assessing development and alignment of the human and technological organizational environment
- Explaining in clear and concise, technical, and non-technical terms process-related and systems-related activities

Options include a concentration in traditional quality-focused manufacturing concepts, as well as a concentration in applications specific to Measurement Science - Metrology.

The degree is administered through an online modality in a 12-week semester format to serve working adults. Instructors are recognized experts in their respective subject matter. They provide a practical perspective to the theoretical concepts in the BSQA curriculum. The degree program is supported by local sections of ASQ-Global Voice of Quality.

#### Graduate

The Master of Science in Quality Assurance (MSQA) is designed to prepare professionals in quality, engineering, science, and/or technical positions for career advancement. Quality professionals are leaders of teams where their specialized skills promote organizational excellence, reduce wastes, and improve existing processes. The traditional applications of Quality as related to product performance have evolved to most every industry, such as healthcare, finance, life science, hospitality, and non-profits. The curriculum is designed to meet the needs and interests of the working professional.

The program of study provides theoretical knowledge and analytical techniques, as well as management and communication skills that will enable the student to function in an active, analytic capacity in the implementation of processes, policies and practices. A unique feature of the MSQA program is that it gives students the ability to customize their program of study to include their areas of interest. During the course of the program students will acquire knowledge and skills in the following areas: managing a Quality organization; planning and implementing a Quality program; troubleshooting and solving quality problems; incorporating quality concepts and human factors techniques in the design of manufacturing operations; performing vendor surveys and assessing vendor quality; developing and analyzing statistical process control charts; developing and analyzing acceptance sampling plans; design of experiments; analyzing the design and engineering of reliable products and processes; performing process capability studies; performing quality cost analyses; understanding and working with human behavior in the organization; performing reliability, maintainability, and safety systems reviews; performing quality system audits; and performing statistical studies and analyzing statistical reports. Options for a concentration in traditional manufacturing-focused Quality

concepts, as well as applications specific to Healthcare and Service Industries are available.

Online and on-site versions of the degree are available to serve working adults. The degree program is supported by local chapters of the ASQ-Global Voice of Quality Organization.

## **Academic Advisement**

For general questions about admission or degree requirements for the Quality Assurance programs, students and perspective applicants may contact Student Support Coordinator, Karla Martinez.

For academic advisement, students can contact the MSQA Advising Consultant, Dr. Milton Krivokuca.

## Preparation

The Master of Science in Quality Assurance (MSQA) is designed to prepare professionals in quality, engineering, science, management, health care, government and service industries for career advancement

In order to help manage and lead today's organizations toward the objective of "total quality," an interdisciplinary approach is taken to blend study in management, quality concepts, and statistical tools. The curriculum is designed to meet the needs and interests of the working professional. Relevant theoretical and practical course work, independent study, interaction with fellow students and leading learning experience.

A unique feature of the MSQA program is the opportunity students have to customize their program of study to include areas of personal and professional interest.

Participating in the MSQA course work will help prepare professional to take the examinations leading to the Certified Quality Auditor (CQA), Certified Quality Engineer (CQE), Certified Quality Manager (CQM), Certified Supplier Quality Professional (CSQP), and Certified Reliability Engineer (CRE) certifications.

## **Admission Requirements**

To be admitted to the Master of Science in Quality Assurance program, applicant must meet the following requirements:

- 1. Meet all CSU Dominguez Hills graduate admission requirement;
- A baccalaureate degree from a four-year accredited institution is required. An undergraduate major in engineering or science is preferred (please see note below);
- 3. A grade point average of at least 2.50 in the last 60-semester units of upper division coursework attempted;
- 4. Good standing at the last institution attended; and
- 5. Meet all other university admission requirements.

The baccalaureate degree should have included the following:

- · 3 semester units of Chemistry (general)
- · 3 semester units of Physics
- 6 semester units of Mathematical Statistics & Theories of Probability (upper division)
- · 3 semester units of Principles of Computer Technology

**Note:** Individuals from other undergraduate disciplines who demonstrate exceptional promise may be admitted to the program, pending completion of additional undergraduate prerequisites coursework or

other demonstrations of competence as determined by the Quality Assurance Academic Program Committee. All special admissions are subject to approval by the Quality Assurance Academic Program Committee.

### Undergraduate Programs Bachelor

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- · Flexibility, agility, and adaptability
- · Good time management skills
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- Effective communications
- · Detailed fact-based analytics acumen
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The BSQA program of study provides knowledge and practical analytical techniques that apply quality improvement tools and methodologies related to each of these current business needs.

The online BSQA program is designed primarily as an upper-division transfer program for students who have completed the majority of their lower-division general education courses. The program requires no on-campus attendance. Courses are offered throughout the year on a trimester basis.

Students will acquire knowledge and skills in the following areas:

- Analyzing a Quality Management System/Organizational Excellence
  Program
- Examining and characterizing a quality management system to reflect the internal culture of an organization
- Illustrating a quality-focused new process development for organizational programs in current organizational programs such as environmental and social governance

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## **Graduate Programs**

#### Master

 Quality Assurance, Master of Science (https://catalog.csudh.edu/ academics/quality-assurance/quality-assurance-ms/)

## Faculty Milton Krivokuca DBA Interim Program Coordinator

Program Office: EE 1300, (310) 243-3880 or (949) 892-7994

## Courses

#### QAS 200. Fundamentals of Quality. (3 Units)

A study of the fundamentals of Quality with an emphasis on the current international standards, planning, organizations, methods and tools. Emphasizes the works of leading international Quality theorists, especially Juran and Deming. Offered Fall, Spring, Summer

#### QAS 220. Fundamentals of Measurement Science. (3 Units)

Prerequisites: MAT 131. Introductory overview of the fundamentals of measurement with emphasis on application of measurement science concepts to quality management. Upper Division Offered Fall, Spring, Summer

#### QAS 312. Interpretation of Technical Documentation. (3 Units)

Prerequisites: MAT 153, QAS 200, QAS 220. Interpretation of basic engineering drawing concepts, including all related common symbolism and formatting. Emphasis on dimensions, tolerances, and configuration management. Introduction to Military and Federal Specifications/ Handbooks, ANSI, IEC, and ISO documents, specifications and recommended practices issued by private organizations. Offered Spring

#### QAS 325. Technical Communications. (4 Units)

Prerequisites: ENG 110, THE 120. Technical communications, written and oral, and how they differ from non-technical writing and speech. Emphasizes methods for the positive and unambiguous transfer of technical ideas so that they can be clearly understood by the reader or listener.

Offered Summer

#### QAS 330. Statistical Quality Control and Inspection. (3 Units)

Prerequisites: MAT 131, QAS 200, QAS 220. Introduction to the application of statistical methodologies to the analysis and solution of quality and management problems (including probability concepts, control charts, and sampling). Focus will be on application of these tools to the inspection process. Offered Fall

#### QAS 331. The Manufacturing Process. (3 Units)

Prerequisites: QAS 312. Introduction to the fundamentals of manufacturing, where the conversion of raw materials and subassemblies into more useful entities adds value to the converted materials in the most efficient manner, using the least amount of time, money, space and manpower. Offered Fall

#### QAS 332. Electrical Metrology. (3 Units)

Prerequisites: MAT 131, PHY 122, QAS 200, QAS 220. Electrical measurement concepts, circuits and devices; applications to DC and AC measurements. Theory of coupled circuits in magnetic and capacitive environments, and electrical laboratory practices, with analysis, construction, and troubleshooting of circuits. Documentary control procedures for calibrations and other measurements. Offered Spring

#### QAS 335. Quality Auditing. (3 Units)

Prerequisites: QAS 200. The fundamental principles for preparing and planning, conducting, reporting and closing quality audits. Quality audit tools and techniques are introduced, with an emphasis on generally-accepted quality audit practices that support business performance. Offered Fall

#### QAS 340. Measurement Uncertainty. (3 Units)

Prerequisites: MAT 131, MAT 153, QAS 200, QAS 220. Theoretical versus actual measurements. Probability and statistical concepts to define accuracy, precision, error, uncertainty, and bias. Differences between measurement accuracy and measurement error; random and systematic error; uncertainty interval; tolerance limits; accuracy ratio; relative errors; and propagation of measurement errors. Offered Spring

#### QAS 347. Dimensional Metrology. (3 Units)

Prerequisites: PHY 122, QAS 200, QAS 220. Measurement of length, angularity, relative position, flatness, parallelism, concentricity, squareness, and threads. Lasers and optical tooling in large-scale measurements; also gauges, comparators, and measurement machines. Measurement uncertainties pertinent to dimensional metrology; sources of error; the effect of the measurement environment. Offered Infrequent

#### QAS 350. Physical Metrology. (3 Units)

Prerequisites: PHY 122, QAS 200, QAS 220. Theoretical and practical applications of measurement principles as applied to various physical properties. Measurement of pressure, mass, force, torque, temperature, humidity, flow, and rotational motion. Identifying sources of error, techniques to minimize errors and maintaining measurement traceability. Offered Infrequent

#### QAS 355. Safety and Reliability. (3 Units)

Prerequisites: MAT 131, MAT 153, QAS 200, QAS 220. Reliability, maintainability, and safety technology with practical industrial applications. Basic models; metrics; testing; methods of implementing improvements; accelerated life testing. Failure mechanisms for chemical, electro-chemical, electronics, electro-mechanical and opto-electronics systems. Introduction to software reliability. Focus on qualification for ISO 9000.

Offered Spring

#### QAS 360. Fundamentals of Lean Manufacturing. (3 Units)

Prerequisites: QAS 200, QAS 220. Deals with the strategies and practices of lean production, as well assess with areas of waste, interrelationships among the various components of a system, theories of leadership and management of people, and process variation.

Offered Spring

#### QAS 395. Selected Topics in Quality Assurance. (1-4 Units)

Prerequisite: Consent of Instructor. An intensive study of an issue, concept, or theory in Quality Assurance that is of special interest to both the faculty member and the student. Repeatable course. Offered As needed

#### QAS 427. Quality Improvement. (3 Units)

Prerequisites: QAS 200, QAS 220. Quality factors involving customer satisfaction, demonstrating that meeting quality needs requires and active role by all the major sectors of an organization. Operational and statistical techniques most often used to monitor, control, and improve the quality of products or services. Offered Fall

#### QAS 445. Systems Failure Analysis. (3 Units)

Prerequisites: QAS 200 and QAS 220. Integrates Quality, Manufacturing and Procurement efforts to identify and eliminate the root causes of failures in systems, sub-systems and components, emphasizing fault tree and Pareto analyses. Hardware and statistical analysis, design of experiments, and technical data package evaluations. Offered Fall

#### QAS 450. Value Based Quality. (3 Units)

Prerequisites: QAS 200, QAS 220 and consent of instructor. Used value received, as perceived by the customer, as the primary measure of quality in the development of cohesive enterprise-wide quality management systems. A systemic approach to establishing the correct things to do and a measurement -based process for implementation. Offered Spring

#### QAS 494. Independent Study. (1-3 Units)

Prerequisites: Consent of instructor. Independent study of a particular problem under the direction of a member of the Quality Assurance Department. Repeatable course.

Offered Infrequent

#### QAS 495. Selected Topics in Quality Assurance. (1-4 Units)

Prerequisites: Consent of instructor. An intensive study of an issue, concept, or theory in Quality Assurance that is of special interest to both the faculty member and the students. Repeatable course. Three hours of lecture per week.

Offered Fall, Spring

#### QAS 496. Internship in Quality Assurance. (3 Units)

Prerequisites: Completion of all 300 level courses in the major. Assignment in an off-campus internship with a cooperating organization, to be selected in consultation with the program coordinator. Emphasis on the role of professionalism and ethics in the life of the quality professional.

**Offered Infrequent** 

#### QAS 498. Directed Research in Q.A.. (3 Units)

Prerequisites: Completion of all 300 level courses in the major. Directed research on one or more topics to be selected in consultation with the program coordinator. Emphasis on the role of professionalism and ethics in the life of the Quality professional. Offered Fall, Spring

#### QAS 499. Senior Project. (3 Units)

Prerequisites: QAS 496 or QAS 498. A capstone project focusing on the role of leadership in relation to professionalism and ethical standards in the field of Quality Assurance. Graduate Offered Fall, Spring

QAS 510. Advanced Probability and Statistics. (3 Units)

Prerequisites: undergraduate calculus, Probability and statistics. A study of measures of central tendency and dispersion, important discrete and continuous probability distributions, sampling theory, hypothesis testing and estimation. Linear regression and correlation will also be covered. The uses of statistics in testing, inspection, and production will be identified.

Offered Fall, Spring

#### QAS 511. Quality Function Management and TQM. (3 Units)

A study of the functions and responsibilities of the quality organization. TQM concepts, quality function deployment, and the tools for continuous improvement are analyzed for sequence of use and development. Offered Fall, Spring, Summer, All terms

#### QAS 512. Reliability. (3 Units)

Prerequisite: QAS 510. Overview of reliability engineering. Use of mathematical models of predictions, confidence assessment, and systems reliability. Emphasis on practical applications for product or system design.

Offered Fall

#### QAS 513. Statistical Quality Control and Sampling. (3 Units)

Prerequisite: QAS 510. The application of advanced statistical methodologies to the analysis and solution of quality and management problems, including probability theory, control charts, sampling, regression analysis and the design of experiments. Focus on statistical process control and related quality technologies. Offered Fall, Spring, Summer

#### QAS 514. Advanced Experimental Design. (3 Units)

Prerequisite: QAS 510. Analysis of statistical experimental design strategies. Planning of experiments for the best strategy and objectives. Offered Fall, Spring, Summer

#### QAS 515. Human Factors in Quality Assurance. (3 Units)

A comprehensive survey of human factors engineering theory, research and applications which are of particular relevance to quality assurance. A systems framework will be utilized, emphasizing feedback and interrelations among system components, including the human operator. Emphasis will be placed on operator constraints in the design of work processes, workplaces and instrumentation. Offered Fall, Spring, Summer

#### QAS 516. Measurement and Testing Techniques. (3 Units)

Prerequisite: QAS 510 or consent of instructor. In-depth discussion of equipment, principles and techniques of measurement assurance. Offered Fall, Spring, Summer

#### QAS 518. Quality Project Management and Productivity. (3 Units)

An in-depth examination of current theory and techniques in QA project management. Topics include description of project management techniques as well as procedures for evaluating their overall effectiveness and contributions to production and service quality. Offered Fall, Spring, Summer, All terms

#### QAS 521. Process Control and Capability. (3 Units)

Prerequisites: QAS 513 and QAS 514. Detailed study of procedures and methods for performing machine and process capability studies, troubleshooting production and test problems, and maintaining continuous production and process evaluation in manufacturing operations.

Offered Infrequent

## QAS 522. Applied Systems Reliability, Maintainability and Safety. (3 Units)

Prerequisite: QAS 512. Advanced and detailed analysis of appropriate reliability models, life-cycle reliability prediction and assessment, accelerated test models and techniques, test parameter variation studies, test tailoring and program plans for various reliability test types, maintainability concepts, prediction and assessment techniques, and safety programs.

Offered Infrequent

#### QAS 523. Software Reliability. (3 Units)

A study of the theory and applications of reliability concepts as they relate to software design and implementation. Offered Fall

#### QAS 525. ISO 9000 & The Audit Function. (3 Units)

Prerequisite: QAS 511 is recommended. A study of the ISO 9000 series of quality system standards with emphasis on manufacturing and service industry applications. The studies address the standards interpretation, documentation and implementation including preparation for and creation of internal and external audits. Offered Fall

#### QAS 526. Supplier Quality Assurance. (3 Units)

Prerequisite: QAS 511. Encompasses a study of the fundamental quality requirements attendant to the successful procurement and delivery of end item products or services. It includes the basic supplier issues of specifications, site inspection, selection, rating, certification, and related quality audits.

Offered Spring

#### QAS 527. Quality Measurement. (3 Units)

Prerequisite: QAS 511. Study of Quality Metrics and their application throughout the life cycle of a product or service in a business entity. The study includes Quality Standards, Customer Satisfaction, Quality Tools, Continuous Improvement, Cost of Quality, Supplier and System auditing. Offered Summer

## QAS 530. Statistical Quality Control (SQC) for Service Professionals. (3 Units)

Techniques for applying Statistical Quality Control (SQC) in controlling processes and delivering customer services. Examines methods for establishing and maintaining SPC, QC auditing and sampling and continuous improvement in various service industries. Offered Fall, Spring

#### QAS 531. Customer Satisfaction and Quality Assurance. (3 Units)

In-depth study of current methods for obtaining customer satisfaction. Examines techniques of determining customer needs and development of customer service strategy Quality Control criteria. Offered Fall, Spring

#### QAS 532. Quality Assurance of the Service Delivery Process. (3 Units)

Analyze processes used to deliver service and methods used to assure satisfaction. Examines the relationship of Strategic Quality Planning, the Delivery process, and the usage of TQC and Quality Assurance to achieve strategic goals.

Offered Fall, Spring

#### QAS 534. Change Management. (3 Units)

Prerequisite: QAS 511 is recommended. In depth analysis of current theory, empirical research and best practices related to effective implementation of Quality improvement methodologies that result in desired organizational change, both cultural and operational. Offered Summer

#### QAS 535. Lean Manufacturing. (3 Units)

Prerequisite: QAS 511 is recommended. In depth study of the theory and practices of lean production. Covers waste minimization, interrelationships among various components of a system, theories of leadership and management, and process variability reduction. Offered Spring

#### QAS 536. Six Sigma Principles and Applications. (3 Units)

Prerequisite: QAS 510 OR QAS 511 are required. QAS 511 is recommended. In depth study of the application of the six sigma process; covers content of the methodology areas of Define Measure, Analyze, Improve and Control (DMAIC) including team concepts, project management, advanced statistical process control and techniques, and measurement systems analysis. Offered Summer

#### QAS 537. Quality Function Deployment: Understanding Customer Requirements. (3 Units)

Prerequisite: QAS 511 is recommended. In depth study of the theory and application of the quality management process, Quality Function Deployment, for designing customer requirements into products and services. Course will evaluate the tools of QFD and study their application in analysis of customer requirements. Offered Summer

## QAS 538. Evaluation and Outcome Analysis for Healthcare Delivery. (3 Units)

Examines operational and statistical techniques used to monitor, control, and improve the quality of services provided by healthcare. Considers the tools of Quality and their direct application to practical situations and healthcare processes.

Offered Spring

#### QAS 539. Good Manufacturing Practices. (3 Units)

Prerequisite: QAS 511 is recommended. Current Good Manufacturing Practice regulations to assure quality of medical devices and pharmaceutical products. Covers development, manufacturing, Quality management and organizational requirements of medical devices. Pharmaceutical regulations include personnel, facilities and equipment, process and product controls, laboratory and reporting. Offered Spring

#### QAS 540. Food and Drug Law. (3 Units)

Prerequisite: QAS 511 is recommended. This course is designed to provide a practical interpretation of the food and drug laws and interpretations for professionals who are providing products or services in industries regulated by the Federal Food & Drug Administration. Offered Spring

#### QAS 541. Biomedical Quality Control Methods. (3 Units)

In depth study of quality control discipline as applied to medical device, pharmaceutical and/or biologies regulated environments. Topics include influencing discipline and applying models; methods that monitor, maintain and/or improve product or service quality; and operational efficiency.

#### Offered Fall

QAS 542. Risk Management in FDA Regulated Industries. (3 Units)

Prerequisite: QAS 511 is recommended. Risk Management as applied to FDA-regulated and other industries (product and process-related); emphasizes application of risk management tools, plan and program from inception of product and process including manufacturing process and field experience of the product, process or service. Offered Spring

#### QAS 543. Identification and Mitigation of Suspect and Counterfeit Items. (3 Units)

Prerequisite: QAS 511 is required. Designed to distinguish the characteristics of suspect/counterfeit items (S/CI) and how to mitigate and prevent their occurrences through the development of corrective and preventative action plans into common quality management systems by applying quality tools and methodologies., Offered Summer

#### QAS 544. Digital Transforming Quality 4.0 with Industry 4.0. (3 Units)

Prerequisite: QAS 511 is required. Examines contemporary processrelated issues and assesses how to develop a digital organizational selfassessment through the application of quality tools and methodologies that contribute to continuous improvement and organizational excellence as appropriate in Industry 4.0.

Offered Fall

#### QAS 545. Laboratory Conformity Assessment. (3 Units)

Prerequisite: QAS 511 is required. Evaluates the various systems for laboratory accreditation and certification in compliance with industry and government regulatory requirements to assure safe and reliable products and services are provided for both industry and consumers through assessment and appraisal techniques. Offered Fall

#### QAS 546. Case Studies in Quality. (3 Units)

Prerequisite: Completion of 18 units in MSQA program. Provides students an opportunity to apply their MSQA acquired skills to encourage and enhance dialogue, reinforce comprehension, bridge the gap between theory and practice, develop analytical and critical thinking skills, and to solve practical industry-related problems.

Offered Fall, Spring

#### QAS 553. Lean Accounting & Financial Analysis. (3 Units)

Focus on the application of Lean Six Sigma concepts and techniques to help in the problem-solving challenges that confront today's quality professionals. Builds a strong foundation for the quality professional in any sector.

Offered Fall, Spring

#### QAS 591. Credit for Prior Learning: Quality Auditing. (3 Units)

The Certified Quality Auditor (CQA) is a professional certification from the American Society of Quality (ASQ). Students holding this certification satisfy the elective course QAS 525. The ASQ CQA must be current when entered into the student transcripts. Offered As needed

#### QAS 592. Credit for Prior Learning (CPL) Quality Measurement. (3 Units)

The Certified Manager of Quality-Organizational Excellence (CMQ-OE) is a professional certification from the American Society of Quality. Students holding this certification satisfy the elective course QAS 527. The ASQ CMQ-OE must be current when entered into the student transcript. Offered As needed

#### QAS 593. Credit for Prior Learning (CPL) Six Sigma Principles and Applications. (3 Units)

The Certified Six Sigma Black Belt (CSSBB) is a professional certification from the American Society of Quality (ASQ). Students holding this certification satisfy the elective course QAS 536. The ASQ CSSBB must be current when entered into the student transcript. Offered As needed

#### QAS 594. Ind Study In Assurance Science. (1-4 Units)

Prerequisites: Instructor and program Coordinator approval; QAS 510, QAS 511 and a minimum of five QAS courses recommended. Independent research or special project to be conducted in consultation with an instructor.

Offered Infrequent

#### QAS 595. Special Topics by Directed Study: Quality Assurance Applications. (3 Units)

A course of study designed cooperatively by student and instructor, and approved by the Program Coordinator, in which students apply quality assurance theory and principles to a particular occupational setting relevant to their professional interests and aspirations. Repeatable course. Three hours of lecture per week. **Offered Infrequent** 

#### QAS 598. Directed Research. (3 Units)

Prerequisites: Completion of 18 units toward degree and GWAR. Directed reading and research, designed cooperatively by student and instructor and approved by the program coordinator, emphasizing application of Quality Assurance theory and principles to a particular occupational settina.

Offered Fall, Spring, Summer

#### QAS 599. Project. (3 Units)

Prerequisites: Completion of all other coursework in the degree program. The goal of all students enrolled in this culminating experience course is to complete a project under the guidance of an assigned instructor. It is the culminating learning experience of the program, and includes a significant written report. To meet the standards established by the faculty, the project must demonstrate a rigorous scientific approach to the quality profession.

Offered Fall, Spring

#### QAS 600. Grad Continuation Course. (1 Units)

Graduate students who have completed their coursework but not their thesis, project, or comprehensive examination, or who may have other requirements remaining for completion of their degree, may maintain continuous attendance by enrolling in this course. Signature of graduate program director required.

Offered Fall, Spring, Summer