



**Course Information**

<b>Course Title</b>	Testing and Inspection Systems
<b>Course Prefix, Num. and Title</b>	QCTC 1446
<b>Division &amp; Department</b>	Vocational Science: Manufacturing Technology
<b>Course Type</b>	WECM Course
<b>Course Catalog Description</b>	A study of testing and inspection systems including pertinent specifications, inspection tools, gauges, instruments, and mechanisms, used in illustrating the need for maintaining quality to established standards. This course also includes the principles of non-destructive testing (NDT) and sensory inspection.
<b>Pre-Requisites</b>	TSI requirements met.
<b>Co-Requisites</b>	None

**Semester Credit Hours**

<b>Total Semester Credit Hours</b>	4
<b>Lecture Hours</b>	3
<b>Equated Pay Hours</b>	4
<b>Lab/Other Hours</b>	2
<b>Lab/Other Hours Breakdown: Lab Hours</b>	2
<b>Lab/Other Hours Breakdown: Clinical Hours</b>	Enter Clinical Hours Here.
<b>Lab/Other Hours Breakdown: Practicum Hours</b>	Enter Practicum Hours Here.
<b>Other Hours Breakdown</b>	2

**Approval Signatures**

<b>Title</b>	<b>Signature</b>	<b>Date</b>
<b>Prepared by:</b>		
<b>Department Head:</b>		
<b>Division Chair:</b>		
<b>Dean/VPI:</b>		
<b>Approved by CIR:</b>		

## Additional Course Information

**Topical Outline:** Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

- IMTME018-GCU -> Mechanical Measurements -> 16 Hrs .
- IQTTS001-GCU -> Sensory inspection -> 4 Hrs .
- IQTTS008-GCU -> Visual Testing -> 16 Hrs .
- IQTTSO26-GBE -> Lab Test Fundamentals -> 12 Hrs .
- IQTTS002-GBE -> NDT Introduction-Non-Specialists -> 20 Hrs .
- Testing and Inspection Systems - Special topics /technical overview -> 12 Hrs.

Lab: This course will feature hands-on lab to enhance the lectures.

### Course Learning Outcomes:

**Learning Outcomes – Upon successful completion of this course, students will:**

- 1.Utilize tools to perform mechanical measurements
- 2.Perform sensory inspection (using your senses)
- 3.Perform visual testing
4. Perform lab test fundamentals
- 5.Demonstrate/apply NDT basics (for Non-Specialists)
- 6.Demonstrate operation and care, for testing and inspection equipment.
- 7.Develop calibration, calibration documentation, and traceability verification to national standards.

### Methods of Assessment:

Periodic written quizzes and exams.

Hands-on laboratory assessments.

Exam / hands-on performance analysis will be performed to identify weaknesses in the program.

### Required text(s), optional text(s) and/or materials to be supplied by the student:

Industry hand-outs and selected text.

### Suggested Course Maximum:

20

### List any specific or physical requirements beyond a typical classroom required to teach the course.

Associated lab requirements.

**Course Requirements/Grading System:** Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

- 1.Quizzes, homework, assignments, and class participation – 25%
- 2.Lab, and cross disciplinary skills (work ethic, safety, teamwork, housekeeping, attitude). – 25%
- 3.Mid-term exam – 25%
- 4.Final Exam – 25%

Grading.

A – 100-90

B – 89-80

C – 79-70

## Curriculum Checklist:

- Academic General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Academic WCJC Core Course.** Attach the Core Curriculum Review Forms
  - Critical Thinking
  - Communication
  - Empirical & Quantitative Skills
  - Teamwork
  - Social Responsibility
  - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist