ETDM 2423 Quality Systems and Practices
Students learn to use various quality processes to improve the manufacturing of industry products. Statistical process control (SPC), total quality management (TQM), and the various steps involved in earning ISO certifications are taught as projects with an emphasis on how quality effects customer service and customer relations. A variety of testing equipment is used to verify the quality of manufactured items.

Type of course: Theory/Lab.
Credit Hours: 3; Total clock hours of theory per semester: 25%; Total clock hours of lab for the semester: 75%;
Class length – Full semester
Class days and times: MWF 10:00 – 11:25
Prerequisites: N/A

Instructor Name: Timothy Walker
Instructor Phone: (918) 293-5154
Office: Reynolds Bldg. Room 143
Instructor email: tim.walker@okstate.edu
Contact: My preferred method of contact is email. Please allow 24-48 hours to return your correspondence during the normal work week.

Instructor's Office Hours: Tuesday & Thursday: 8:30 a.m. – 9:30 a.m.

Division Name: School of Engineering Technologies
Division’s Main Phone: (918) 293-5150

REQUIRED TEXT, REFERENCES, AND MATERIALS

Texts:
- Quality Improvement 9th Ed.
- Interpretation of Geometric Dimensioning & Tolerancing 3rd Ed.

References:
- Machinery’s Handbook 30th Ed.

Materials:
- Materials needed are notebook, pen or pencil, calculator, folder, safety glasses, thumb drive (1G minimum).

Uniform/Tools:
- Shoes (no open toed), long pants, and no jewelry.

Estimated Cost for Materials: $250.00
Estimated Cost for Uniform/Tools: $5.00
Upon completion of the course, students should:

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Assessment of Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate knowledge of GD&amp;T symbols and principles</td>
<td>Exam</td>
</tr>
<tr>
<td>Demonstrate the use of all measuring equipment in the Quality Verification center.</td>
<td>Lab</td>
</tr>
<tr>
<td>Measure thread pitch diameters using the three wire method.</td>
<td>Lab</td>
</tr>
<tr>
<td>Demonstrate knowledge of the ISO 9001-2015 Quality Management System.</td>
<td>Lab</td>
</tr>
<tr>
<td>Demonstrate knowledge of Root Cause Analysis, Non-Conformances, and Corrective Actions.</td>
<td>Lab</td>
</tr>
<tr>
<td>Demonstrate the principles of SPC, TQM, Lean Manufacturing and Six Sigma.</td>
<td>Homework / Quizzes</td>
</tr>
<tr>
<td>Demonstrate the use of Inspection Report.</td>
<td>Lab</td>
</tr>
</tbody>
</table>

Aspects of the course objective assessments may be used in the university’s assessment of student learning. If applicable, an asterisk (*) above indicates this course is used in the university assessment program.

**COURSE ACTIVITIES**

In this course students will:

- Participate in class discussions and activities.
- Complete projects assigned in the lab.
- View videos, and PowerPoints that depict the various concepts.
- Take examinations.
- Complete reading, and homework assignments.
- Required to do quizzes.
EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS:

<table>
<thead>
<tr>
<th>Task</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework / Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Notes</td>
<td>15%</td>
</tr>
<tr>
<td>Projects</td>
<td>50%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*The student’s grade for this assignment will be used in the university’s assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student’s course grade.

Students are required during the final semester week to clean and apply proper maintenance to all machines and designated areas. Failure to do so will result in a drop in grade by one letter grade.

AUTHORIZED TOOLS
Students may use any/all course materials, including books and notes, while participating in classroom activities with instructors’ permission. All quizzes and written assignments are to be completed independently; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty. However, working in groups to prepare for assignments is encouraged.

LATE WORK
A tentative course schedule is provided with this syllabus. All work is to be completed at the specific times and dates otherwise no late work is accepted. However, late work may be accepted at my discretion if previously arranged or in emergency situation only up to one week after the initial assignment due date.

TESTING
No notes or reference material will be used during quizzes and exams unless approved by the instructor.

UNIVERSITY & COURSE EXPECTATIONS
It is the responsibility of each OSUIT student to read, abide by and maintain a copy of the syllabus for this course. Syllabi are available on the OSUIT website.

Students understand that excerpts or portions of their work may be utilized for institutional assessment purposes. The purpose of institutional assessment is for verification of student learning and program improvement. Every effort will be made to keep this information confidential.
AMERICANS WITH DISABILITIES ACT (ADA)
According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Academic Accommodations/LASSO Center. Please advise the instructor of your disability as soon as possible, and contact The LASSO Center, located in the Noble Center for Advancing Technology – NCAT, top floor, and 918-293-4855 to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. (Fall 2013)

ACADEMIC DISHONESTY
Academic dishonesty or misconduct is neither condoned nor tolerated at OSUIT. Any student found guilty of academic dishonesty or misconduct shall be subject to disciplinary action. Academic dishonesty and/or misconduct includes, but is not limited to, the following actions: (1) Plagiarism: the representation of previously written, published, or creative work as one’s own; (2) Unauthorized collaboration on projects; (3) Cheating on examinations; (4) Unauthorized advance access to exams; (5) Fraudulent alteration of academic materials; (6) Knowing cooperation with another person in an academically dishonest undertaking. Students are required to actively protect their work against misuse by others. For details, refer to The OSUIT Student Handbook (Student Rights and Responsibilities Governing Student Behavior) available online at http://www.osuit.edu/academics/forms/student_rights_responsibility.pdf.

ATTENDANCE POLICY FOR FACE-TO-FACE COURSES
A primary component of OSUIT’s Mission is “to prepare and sustain a diverse student body as competitive members of a world-class workforce.” Regular and consistent attendance not only aids in academic success, dependable attendance is a requirement in today’s real-world employment; therefore, regular and consistent attendance is a requirement in all OSUIT courses.

Definitions: Absent: Failing to attend all or a significant portion of a class or lab session.

A. Students may not be marked as absent if missing class for situations such as, but not limited to
   1. participating in a required university activity such as a field trip;
   2. fulfilling a military obligation;
   3. a mandatory court appearance;
   4. death in the immediate family;
   5. extreme illness or accident to oneself or immediate family.
   Instructors, at their discretion, may require proof of such events.

B. It is the responsibility of the student to contact and inform the instructor and/or department in advance of such excused absences whenever possible.
Tardy: Arriving late to class as defined by the individual class instructor. Faculty, at their discretion, may equate three tardies to equal one absence.

If you arrive within the first ten minutes of the class period you will be counted tardy, you will not be counted absent. If you arrive after the first ten minutes of the class period has passed, you will be counted absent.

**Procedures:**

**Early Intervention**
A. Any student who misses 10% of an individual course (or earlier at faculty discretion) during a regular fifteen-week semester, or the equivalent portion of time in a shorter session, will have their name submitted by that course instructor to the OSUIT Early Alert System for retention intervention.
B. At the point the Early Alert is issued, the student must meet with their assigned faculty advisor or designated faculty/staff member within seven (7) academic calendar days for counseling on how to improve their attendance and academic success.

**Excessive Absences**
A. The University reserves the right to administratively withdraw any student from an individual course who misses 20% of that course, whether excused or unexcused, and, in the opinion of the instructor, the student does not have a reasonable opportunity to be successful in the course.
B. Students should be aware any of the following may impact their financial aid:
   1. being administratively withdrawn from a course
   2. dropping a course
   3. their last date of attendance in a course

Please see OSUIT Policy 2-021 for full details and procedures.

**OSUIT Policy and Procedures:**
Student policy and procedures not specifically outlined in this course syllabus can be found on the OSUIT web site under the Current Students drop down menu in the Student Handbook link.
http://go.osuit.edu/student/residential_life/student_quick_reference
### Course Schedule – All work is due by 11:59 P.M.

<table>
<thead>
<tr>
<th>Course Outline Schedule</th>
<th>Topic</th>
<th>Assignment</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Intro. To Quality Measuring Equipment</td>
<td>Syllabus General Measuring Equipment Plate, Strike Erection Arm</td>
<td>9/9/16</td>
</tr>
<tr>
<td>Week 2</td>
<td>Formulas &amp; Calculations / GD&amp;T / 1st Project</td>
<td>Chapter #1 &amp; #2 (Quality Improvement) Chapter #1 (Interpretation of GD&amp;T) Sheet Metal</td>
<td>9/16/16</td>
</tr>
<tr>
<td>Week 3</td>
<td>Measuring Equipment</td>
<td>Chapter #3 &amp; #4 (Quality Improvement) Chapter #2 (Interpretation of GD&amp;T) Optical Comparator</td>
<td>9/23/16</td>
</tr>
<tr>
<td>Week 4</td>
<td>Formulas &amp; Calculations / 2nd Project</td>
<td>Chapter #5 (Quality Improvement) Chapter #3 (Interpretation of GD&amp;T) Piston</td>
<td>9/30/16</td>
</tr>
<tr>
<td>Week 5</td>
<td>Measuring Equipment</td>
<td>Chapter #6 (Quality Improvement) Chapter #4 (Interpretation of GD&amp;T) Profilometer</td>
<td>10/7/16</td>
</tr>
<tr>
<td>Week 6</td>
<td>3rd Project</td>
<td>Chapter #7 (Quality Improvement) Chapter #5 (Interpretation of GD&amp;T) Rod End Clevis</td>
<td>10/14/16</td>
</tr>
<tr>
<td>Week 7</td>
<td>Measuring Equipment</td>
<td>Chapter #8 (Quality Improvement) Chapter #6 (Interpretation of GD&amp;T) Coordinate Measuring Machine</td>
<td>10/21/16</td>
</tr>
<tr>
<td>Week 8</td>
<td>4th Project</td>
<td>Chapter #9 (Quality Improvement) Chapter #7 (Interpretation of GD&amp;T) Water Pump Pulley</td>
<td>10/28/16</td>
</tr>
<tr>
<td>Week 9</td>
<td>ISO 9001 Overview</td>
<td>Chapter #10 (Quality Improvement) Chapter #8 (Interpretation of GD&amp;T)</td>
<td>11/4/16</td>
</tr>
<tr>
<td>Week 10</td>
<td>Measuring Equipment</td>
<td>Chapter #11 (Quality Improvement) Chapter #9 (Interpretation of GD&amp;T)</td>
<td>11/11/16</td>
</tr>
<tr>
<td>Week 11</td>
<td>5th Project</td>
<td>W. Edward Deming Video Tow Lug</td>
<td>11/18/16</td>
</tr>
<tr>
<td>Week 12</td>
<td>Measuring Equipment</td>
<td>General Safety Hardness Tester</td>
<td>12/2/16</td>
</tr>
<tr>
<td>Week 13</td>
<td>Measuring Equipment</td>
<td>Brain Storming Exercise Tensile Tester</td>
<td>12/9/16</td>
</tr>
<tr>
<td>Week 14</td>
<td>6th Project</td>
<td>Piston Stop Final Exam</td>
<td>12/12/16</td>
</tr>
<tr>
<td>Week 15</td>
<td></td>
<td>Clean / Finishing Projects</td>
<td>12/14/16</td>
</tr>
</tbody>
</table>

Schedule is subject to change at instructor discretion.
I have read and understand this syllabus, and agree to abide by the policies, procedures and guidelines specified therein.

Printed Name ____________________________ OSUIT Student CWID Number ____________________________

Signature ____________________________ Date ____________________________