Spring 2013
Intro. To Automated Manufacturing
MFGT 1302 43001

Lecture  Monday-Wednesday 8:00 AM –10:40 AM  Room L-106
Lab    Monday-Wednesday 8:00 AM –10:40 AM  Room L-106

Instructor: Mike Givens

Contact Information:
Office:   L105
Home Phone 972-771-5007
Cell Phone    214-202-8578
Email address: givens2@swbell.net
Hours Available: By Appointment

Course Description (from Eastfield Catalog):

MFGT 1302  Introduction to Automated Manufacturing (3)
This is a WECM Course Number.
This course is an overview of automated manufacturing principles. It includes coverage of manufacturing process, control systems, and measurement theory. Students will identify terminology and fundamental concepts of manufacturing; describe the trends of manufacturing careers within the industry cluster; identify safety, health, environmental, and ergonomic issues in manufacturing; discuss quality and continuous improvement methods; describe the importance of maintenance within manufacturing; and identify processes and production steps in manufacturing. (2 Lec. 4 Lab.)

Textbooks and Other Course Materials:

Recommended supplies: 3-ring binder and scientific calculator (TI 36x solar preferred)

Course Objectives:

1. Identify common symbols and their physical counterpart.
2. Learn to read and connect ladder diagrams.
3. Learn pneumatic power characteristics, applications, advantages and disadvantages.
4. Learn uses and limitations of common pneumatic components like conditioning units, accumulators, long tubing lines and safety valves.
5. Learn to read a pressure meter and determine force applied.
6. Perform basic calculation of volume and pressure.
7. Learn what a pneumatic motor is and its limitation.
Evaluation Procedures:

This course is primarily a lab/computer simulation course and as such 75% of your grade will be determined by instructor observation of your performance in Lab. 20% will be test scores, and the remaining 5% will be home work and internet searches.

Course Outline:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1-23</td>
<td>Introduction to course and equipment</td>
<td>1-1</td>
</tr>
<tr>
<td>2</td>
<td>1-28</td>
<td>Introduction to Pneumatics</td>
<td>1-17</td>
</tr>
<tr>
<td>3</td>
<td>2-4</td>
<td>Air Conditioning and Distributing Equipment</td>
<td>1-25</td>
</tr>
<tr>
<td>4</td>
<td>2-11</td>
<td>Basic Physical Concepts</td>
<td>2-1</td>
</tr>
<tr>
<td>5</td>
<td>2-18</td>
<td>Pressure and Force Relationship</td>
<td>2-3</td>
</tr>
<tr>
<td>6</td>
<td>2-25</td>
<td>Pressure and Volume Relationship</td>
<td>2-13</td>
</tr>
<tr>
<td>7</td>
<td>3-4</td>
<td>Pressure Drop vs. Flow Relationship</td>
<td>2-19</td>
</tr>
<tr>
<td>8</td>
<td>3-11</td>
<td>Vacuum Generation</td>
<td>2-29</td>
</tr>
<tr>
<td>9</td>
<td>3-18</td>
<td><em>Spring Break</em></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>3-25</td>
<td>Basic Control Cylinders</td>
<td>3-1</td>
</tr>
<tr>
<td>11</td>
<td>4-1</td>
<td>Directional Control Valves</td>
<td>3-3</td>
</tr>
<tr>
<td>12</td>
<td>4-8</td>
<td>Direct &amp; speed control of Cylinders</td>
<td>3-11</td>
</tr>
<tr>
<td>13</td>
<td>4-15</td>
<td>Cylinders in Series</td>
<td>3-25</td>
</tr>
<tr>
<td>14</td>
<td>4-22</td>
<td>Cylinders in Parallel</td>
<td>3-33</td>
</tr>
<tr>
<td>15</td>
<td>4-29</td>
<td>Basic Control of Pneumatic Motors</td>
<td>4-1</td>
</tr>
<tr>
<td>16</td>
<td>5-6</td>
<td>Indirect Control Using Pilot-Operated Valves</td>
<td>4-3</td>
</tr>
<tr>
<td>17</td>
<td>5-13</td>
<td>Final Exam</td>
<td></td>
</tr>
</tbody>
</table>

Attendance Policy:

You are expected to attend regularly all classes in which you enroll. You have the responsibility to attend class and to consult with the instructor when an absence occurs. Instructors are responsible for describing attendance policies and procedures to you. If you are unable to complete a course (or courses) in which you are enrolled, it is your responsibility to withdraw from the course by the appropriate date. If you do not withdraw, you will receive a performance grade, usually a grade of "F". Under Texas Education Code, Section 51.911, all institutions of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. If a student and an instructor disagree about the nature of the absence being for the observance of a religious holy day, or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the President of the institution or his or her designee. The student and instructor shall abide by the decision of the chief executive officer or his/her designee.
Obtaining Final Course Grades Using eConnect

OBTAINING YOUR GRADES AT THE END OF THE SEMESTER
Grade reports are no longer mailed. Convenient access is available online. Just use your student identification number when you log in to e-Connect. Web site address www.dcccd.edu.

Eastfield College Email Policy
Faculty and students must have and use a DCCCD account for all correspondence relating to academic coursework. For information on setting up a DCCCD student email account go to: http://www.dcccd.edu/netmail/home.html

Financial Aid Statement

Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate after the drop date are also subject to this policy.

Financial Aid Statement for Distance Learning Classes

If you are receiving Financial Aid grants or loans and are enrolled in a Distance Learning class, you must show participation in this class prior to the certification date by either e-mailing or contacting the instructor or logging on to eCampus. Do not drop or stop attending any class without consulting the Financial Aid Office. Changes in your enrollment level and failing grades may require that you repay financial aid funds.

Repeating This Course: (Third Attempt to Enroll in a Course)

Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional tuition to students registering the third or subsequent time for a course. All third and subsequent attempts of the majority of credit and Continuing Education/Workforce Training courses will result in additional tuition to be charged. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts include courses taken at any of the Dallas County Community Colleges since the Fall 2002 Semester. See Third Attempt to Enroll in a Course at: http://www.dcccd.edu/thirdcourseattempt/

Academic Honesty Statement

Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion.
As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct. published in the DCCCD Catalog at
Academic dishonesty includes, but is not limited to, cheating on tests, plagiarism and collusion. **Cheating** includes copying from another student’s test or homework paper, using materials not authorized, collaborating with or seeking aid from another student during a test, knowingly using, buying, selling, stealing, or soliciting the contents of an unadministered test, and substituting for another person to take a test. **Plagiarism** is the appropriating, buying, receiving as a gift, or obtaining by any means another’s work and the unacknowledged submission or incorporation of it in one’s own written work. **Collusion** is the unauthorized collaboration with another person in preparing written work for fulfillment of course requirements. Academic dishonesty is a serious offense in college. You can be given a failing grade on an assignment or test, can be failed for the class, or you can even be suspended from college.

**Food and Drink Policy**
Food, drinks, and tobacco products are prohibited in Eastfield College classrooms.

**ADA Statement**
If you are a student with a disability and/or special needs who requires accommodations, please contact the college Disability Services Office in C237, 972-860-8348 or go to http://www.eastfieldcollege.edu/SSI/DSO/index.html

**Religious Holidays**
Absences for observance of a religious holy day are excused. A student whose absence is excused to observe a religious holy day is allowed to contract with the instructor to take a make-up examination or complete an assignment within a reasonable time after the absence.

**Withdrawal Policy**
If you are unable to complete this course, it is your responsibility to withdraw formally. The withdrawal request must be received in the Registrar’s Office by April 18, 2013. Failure to do so will result in your receiving a performance grade, usually an “F.” If you drop a class or withdraw from the college before the official drop/withdrawal deadline, you will receive a “W” (Withdraw) in each class dropped. For more information about drop deadlines, refer to the current printed Credit Class Schedule, contact the Admissions/Registrar’s Office at 972-860-7167 (Room C119), or contact the division office.

**STOP BEFORE YOU DROP**
For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops

Family Educational Rights and Privacy Act of 1974 (FERPA)
In compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA), the College may release information classified as “directory information” to the general public without the written consent of the student. Directory information includes: (1) student name, (2) student address, (3) telephone numbers, (4) date and place of birth, (5) weight and height of members of athletic teams, (6) participation in officially recognized activities and sports, (7) dates of attendance, (8) educational institution most recently attended, and (9) other similar information, including major field of student and degrees and awards received. Students may protect their directory information at any time during the academic year. If no request is filed, directory information is released upon written inquiry. No telephone inquiries are acknowledged. No transcript or academic record is released without written consent from the student, except as specified by law.

Classroom Etiquette

Please do not use your cell phone in class during lecture. Please share tools everyone needs some time with tools.

The instructor reserves the right to amend this syllabus as necessary.