Dr. Mark R. Miller  
mark_miller@uttyler.edu  
Office: HPR 244  
Time: Monday 6:00-8:40 p.m.  
Office Hours: TR 8-9:30 a.m., and by appointment  
(70% lecture – 30% lab)

Course Description
Study of manufacturing related to materials processing. Students will be required to use various manufacturing processes in laboratory assignments.

Lecture Notes
The lecture notes will be made available online on the Blackboard site for the course. The textbook is required and can be purchased at the university book store. (903) 566-7070. Open 8am-5pm.

Student Learner Outcomes
1. Students will demonstrate a thorough understanding of the manufacturing field by successfully passing parts of quizzes and exams related to that topic.
2. Students will demonstrate safe working habits by passing a safety quiz with a grade of 80% or higher and by working in the laboratory without incident.
3. Students will demonstrate familiarity with processing equipment by manufacturing a project according to the required specifications.
4. Students will become familiar with industrial materials used for manufacturing products by successfully completing a project to the required specifications.

Course Competencies
1. Computer-Based Skills – the student will complete written assignments using the word processor.
2. Communication Skills – the student will exhibit a mastery of both written and oral skills in completion and presentation of the assigned projects.
3. Interpersonal Skills – the student will interact in class discussion to clarify thinking regarding manufacturing processes.
4. Problem Solving (Critical Thinking) – the student will use conceptual thinking to analyze and make determinations regarding the use of industrial processing equipment.
5. Ethical Issues in Decision Making and Behavior- the student will gain an appreciation of the ethics of technology through examination of various processing.
6. Personal Accountability for Achievement – the student will complete the projects at the time designated by the instructor and will enter into class discussion.
7. Competence in Technology Principles
   a. Competence in major field and grounding in other major technology major core areas – the student will gain an appreciation of the technology behind how things are manufactured by studying the manufacturing processes and by using industrial manufacturing equipment.
   b. Exposure to and appreciation for industrial experiences such as industrial tours, work-study options and cooperative education, senior seminars – Students use processing equipment found in industry.
Course Requirements

- Daily Quizzes: 200
- Project: 200
- Midterm Exam: 200
- Class Participation/Attendance: 100
- Final Exam: 300

TOTAL POINTS = 1000

Grade Scale Breakdown:
- A = 90 - 100%
- B = 80 - 89%
- C = 70 - 79%
- D = 60 - 69%
- F = BELOW 60%

Note: 89.9999999999999999 is still a B.

Course Policies:
Content for examinations will be taken from lectures, demonstrations, reading assignments, laboratory exercises and any audio-visual materials used, i.e. films, tapes, slides, etc.

Make up examinations are the student's responsibility. No excuses will be accepted after the exam is given. The instructor must be notified prior to the scheduled exam. If not, the student forfeits his/her right to take the exam. Quizzes will not be made up unless a prior acceptable excuse for an absence has been received by the instructor.

Attendance:
Attendance is mandatory and will be taken at every scheduled class and laboratory period. No make-ups unless:

1. Organized university trip.
2. Illness or death in immediate family (mother, father, brother and/or sister).
3. Illness of student.

Each one of these will require either a doctor's statement or a signed statement from the individual in charge of the trip.

A student will lose a letter grade in the course each time s/he is absent or late 3 times. Any student entering the classroom 1 second after the scheduled starting time will be considered late.

Late Work:
All work not turned in on time will have an automatic reduction in value to 50% of its full value. Work that is not turned in by the next class will NOT be accepted. Exceptions to this will be as per University Policy concerning absences from class. If you know an assignment will be late for a valid reason, inform your instructor in advance to avoid unnecessary penalty.
Format for Reports:
Each laboratory report will be placed in a folder, arranged in such that the reader
can easily examine the contents. Any materials that are hard to read or require
special handling to get at will not be graded. The cover must contain the following:
1. Assignment Title
2. Prepared by: Your Name
3. Submitted to Dr. Mark Miller
4. Course Name and Number
5. The Date
Your grade will reflect the quality of the presentation.

Cell Phones:
Cell phones are to be seen and not heard. Make sure you turn off your cell phone
during class or turn it to the vibrator mode. A ringing cell phone is a distraction and
is inappropriate for the classroom. Allowing your cell phone to ring and then
answering it is very rude. It is not fair to your fellow classmates who have paid for
this course. Please be considerate and make sure your cell phone is turned
off during any of your classes. Students will be asked to leave for the day if
this behavior continues.

Discrimination:
The policy of this department is to make your college experience as pleasant as
possible. However, if at any time you feel that you are being discriminated against,
belittled, or not treated appropriately, please notify the instructor either
anonymously or in person immediately after class. It is not the intention of any of
the faculty in this department to make your college experience an unpleasant one.
Remember, the first step in the process is to inform the instructor so s/he can be
made aware of the problem and take corrective action. If the problem continues to
persist, please inform the chair of the department. The dean can then be notified if
the problem continues to exist after a few days. A grievance can then be filed in
the Office of Student Services if there has still been no change in the instructor’s
behavior. It should be noted that filing a grievance is a serious act and should
NOT be done just because you received a bad grade on an exam or in the
course. Communication is an effective tool to solve problems and is rarely
used enough. Most people are not deliberately trying to upset you, they are
just not aware of your vantage point.

Talking:
While the instructor is talking, it is understood that no one should be talking.
Students talking in class prevent other students from hearing the instructor and
learning the material that is required to pass the course. If you are caught talking
then you will earn a zero on your daily quiz grade. On the second offense, you
will be asked to leave. This behavior is rude and disruptive and most students
who talk in class typically earn lower grades. It should be noted, that students
who have been granted permission to talk by the instructor should not be
interrupted as well.
**Offensive Language:**
Any type of offensive language will not be tolerated in the classroom or laboratory. How you speak to your friends outside the classroom is your business, however, when you are in the classroom you must follow the University of Texas rules of conduct. **You will be asked to leave if your language or conduct is offensive.**

**Required Activities Scheduled Outside of Regularly-Scheduled Class Time (fees, tickets, procedures and/or forms required):**
Read textbook, review notes, and complete assignments.

**Department Website:**  [http://www.uttyler.edu/cbt/hrd/tech/](http://www.uttyler.edu/cbt/hrd/tech)

**Commencement:** Saturday, December 14 at 10:00 am, be there by 9:30 at the latest.

**Holidays:** November 27-29 Thanksgiving Holiday

**Students Rights and Responsibilities**
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:
[http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html](http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html)

**Grade Replacement/Forgiveness**
If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to do so will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates will receive grade forgiveness (grade replacement) for only three course repeats; graduates, for two course repeats during his/her career at UT Tyler.

**State-Mandated Course Drop Policy**
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (See Schedule of Classes for the specific date). Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

**DISABILITY STATEMENT**
"If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact the Disability Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability services/accommodation(s) must provide appropriate documentation of his/her disability to the Disability Services counselor. In order to assure approved services the first week of class, diagnostic, prognostic, and prescriptive information should be received 30 days prior to the beginning of the semester services are requested. For more information, call or visit Disability Services located in the University Center, Room 3150. The telephone number is (903) 566-7079."
Additional information may also be obtained at the following UT Tyler Web address:
http://www.uttyler.edu/disabilityservices

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor’s directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do NOT re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Academic Dishonesty Statement
“Academic dishonesty, such as unauthorized collusion, plagiarism and cheating, as outlined in the Handbook of Operating Procedures, University of Texas at Tyler, will not be tolerated. University regulations require the instructor to report all suspected cases of academic dishonesty to the Dean of Students for disciplinary action. In the event disciplinary measures are imposed on the student, it becomes part of the students’ official school records. Also, please note that the handbook obligates you to report all observed cases of academic dishonesty to the instructor.

Lecture/Laboratory Materials:
Students will be required to provide the following:
  1. ASTM or OSHA approved safety glasses
  2. Textbook, notebook, and paper to take notes
  *3. Lecture notes packet (available online)
  4. Pen and pencil
  5. Hearing protection
  6. 3 - Scantrons (Exam type) #882-ES

Laptop Computers:
Laptops are NOT allowed to be turned on in class. You will take notes in the Lecture Notes packet that you downloaded. Laptops will be confiscated by the instructor and returned at the end of class.

Textbook (Required):
Tentative Schedule

August
Administrative concerns, about the course, assignments
Introduction to manufacturing
Major material families, forming, separating, fabricating, conditioning, finishing,
Types of production, lean manufacturing
Planning for production, Total Quality Management, Just-in-time manufacturing,
Simultaneous engineering, design for assembly, design for manufacturing
Manual assembly model, process flow charts, PERT charts, Critical Path Method

September
Safety
Introduction to nonmetallic materials, lumber and wood technology, fasteners, adhesives
Processing nonmetallic materials with table saw, router, miter saw, combination sander, band saw,
drill press, planer, jointer, mortise, shaper, lathe, panel saw, and radial arm saw
Finishing and conditioning wood materials, spray equipment, staining, RF dielectric heating, wood
plastic composition, impreg and compreg, acetylated wood, plasticized wood, staypack, pressure
treated lumber, polyethylene glycol, dip coating, roller coating, tumbling, varnishes, lacquers, latex
and oil based paints
Lab activities
Midterm Exam

October
Introduction to composite materials, advantages and disadvantages, carbon fiber, layered
composites, particulate composites, laminar composites, autoclave molding, pressure roll forming,
liquid infiltration, plasma arc spraying, chemical vapor deposition, filament winding
Processing composite materials, diamond wire sawing, dicing, water jet cutting, lasers, ultrasonic
machining, finishing composite materials
Lab activities

November
Introduction to ceramic materials, advantages and disadvantages, binders, lubricants, slurry
Processing of ceramic materials, dry pressing, dust pressing, wet pressing, hot pressing, throwing,
jiggering, jollying, extrusion, slip casting, drawing, float glass processing, glass blowing

Fabricating and assembly with ceramic materials

December
Lab activities and finishing foosball table project
Review for final
Final Exam will be from 6:00-8:00 p.m. Monday, December 9th.

October 28 Last day to withdraw from one or more courses
November 1 Online registration for Spring 2014 begins, see your advisor in October.