COURSE SYLLABUS

COURSE TITLE: **INMT 1311.271/272 COMPUTER INTERGRATED MANUFACTURING**

INSTRUCTOR: **Rodney Busby**

OFFICE LOCATION **Lubbock Center, Room 132B / lab 132A Lubbock, Texas 79405**

OFFICE PHONE **(806) 716 4910**

Email **rbusby@southplainscollege.edu**

OFFICE HOURS: **1:30-2:30 Tues. & Thurs**.

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I. GENERAL COURSE INFORMATION

A. **Course Description.** A study of the principles and application of computer integrated manufacturing. Employs all aspects of a system including but not limited to integration of material handling, manufacturing, and computer hardware and programming

B. **End-of-Course Outcomes**: Develop an understanding of computer integrated manufacturing; and employ material handling, process and/or manufacturing equipment as a system. Integrate computer software and equipment in a computer integrated manufacturing system and network a computer integrated manufacturing system

C. **Course Competencies.** A = 100-90 B = 89-80 C = 79-70 D = 69-60 F = 59 or below.

D. **Academic Integrity:** It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, **possibly suspension.** For further information concerning cheating and plagiarism, read the section on Academic Integrity in the SPC Catalog.

E. **SCANS and Foundation Skills.** Specific SCANS and Foundation Skills applicable to this course are as follows: (F) 1,2,3,4,5,7,8,9,10,11,12,13,16. (C) 5,7,15,19,20.

F. **Verification of Workplace Competencies–Technical Education Division.** The learning outcomes of this course will prepare the student to meet the entry-level competencies measured in a comprehensive capstone experience course, MCHN 2447

Specialized Tools and Fixtures.

II SPECIFIC COURSE/INSTRUCTOR REQUIREMENTS

A. Textbook and Other Materials.

1. To be Determined.

B. Attendance Policy: Punctual and regular attendance is required. No excused absences. All absences may be made up. All absences in excess of three days must be made up. Three tardies are equal to one absence. When a student reaches six non-made-up absences he/she may be dropped from the course. The instructor may drop a student after three absences if the student refuses to make them up. Any student who has missed (14) consecutive calendar days in a row will be dropped.

C. **Assignment Policy.** Projects, training exercises, and customer work are assigned to each student during the semester. Each of these exercises are graded or evaluated by the instructor. Students are encouraged to complete the lab assignments within reasonable length of time.

D. **Grading Policy/Procedure and/or Methods of Evaluation.** Your grade will be determined on the basis of the following factors:

1. Tests
   a. Results of daily or unit tests will be given a percent grade.
   b. The final exam will be a percent grade.
2. Lab
   a. Students will be graded on Lab Safety Procedures.
   b. Students will be graded on proper use of machine and hand tools.
2. Projects
   a. Students will be graded on quality and precision.
   b. At the instructor's discretion, random projects may be selected for grading without prior notice.
4. Attitude
   a. Students will be graded on conduct in class and lab.
   b. Students will be graded on their attitude toward others.
   c. Penalties will be assessed to students who use foul language.
5. Final Grade
   a. Daily and unit test averages will account for 25% of final grade.
   b. Final exam will account for 25% of your final grade
   c. Lab procedures, safety, and projects will account for 40% of final grade.

d. Attendance and attitude will account for 10% of final grade.

E. **Additional Information.** A student's conduct is expected to follow the guidelines stated in the college catalogue and student handbook, any deviation will result in immediate disciplinary action. No smoking is permitted in the building and food and drinks are not allowed in any classroom, lab or shop. All these activities will be limited to break time in designated areas only. Breaks will be limited to 20 minutes. Please turn off all cell phones, pagers, etc. During class. The use of cell phone for conversation and texting is not permitted during class and lab. If you use your phone during these times you will be asked to leave.

F.

G. **Dress Code. No open toed shoes, sandals or flip-flop styled shoes. No baggy, saggy or drooping clothes. This includes wearing pants pulled down in a "Low Slung Style". For safety considerations standard shop acceptable attire is required. If you have any doubts about what is acceptable see the instructor for clarification.**

H.

ADA StatementStudents with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office through the Guidance and Counseling Centers at Reese Center (Building 8) 716-4606, or Levelland (Student Services Building) 716-2577.

I. "Texas Senate Bill 11 (Campus Concealed Carry) does not go into effect for community colleges until August 1, **2017**."

III. COURSE OUTLINE

F1,2,5	I. After the first unit the student will have a general understanding of PCs and the DOS system and be able to: a. Describe the major parts of a personal computer (PC) and their purpose.	C5,7,15

F1,2,5	b. Explain what a computer language is and why there are different computer languages.	C5,7
F1,2,5,8,11	c. Copy files from one disk to another.	C5,7,15,19
F1,2,5,8,11	d. Format disks and transfer the operating system.	C5,7,15,19
F1,2,5,8,11	e. Set the system time and date.	C5,7,15,19
	f. Define structured programming.	
F1,2,5	g. Be aware of path/files as they are related root and sub-directories on "Hard" drives.	C5,7,15
F1,2,5,8,11	h. Display file contents using the TYPE command.	C5,7,15,19
F1,2,5	i. Know the storage capacities of computer disks.	C5,7
F1,2,5	j. Correctly handle, label, and write-protect floppy disks.	C5,7,15,19
F1,2,5,8,11,12	k. Know how to set up and turn on a PC	C5,7,15,19
	II. At the end of unit 2 the student will be able to:	
F1,2,5,8,11,12	a. Create backup files to backup programs.	C5,7,15,19
F1,2,5,8,11	b. Save programs to disk.	C5,7,15,19
F1,2,5,8,11	c. Retrieve programs from disk.	C5,7,15,19
F1,2,5,8,11	d. View disk contents.	C5,7,15,19
F1,2,5,8,11	e. Rename files and erase unwanted files.	C5,7,15,19
F1,2,5,8,11	f. Print a BASIC program.	C5,7,15,19
F1,2,5,8,11	g. Renumber program lines.	C5,7,15,19
F1,2,5,8,11		C5,7,15,19
		C5,7,15,19
	III. At the end of the unit on CAD fundamentals the student will be able to:	
F1-5,7-13,16	a. run a CAD program and perform basic drawing functions.	C5,7,15,19
F1-5,7-12		C5,7,15,19
F1-5,7-13,16	b. save, load, and edit CAD programs.	C5,7,15,19
	c. simplify programs for easy CNC applications.	

IV. ACCOMMODATIONS

The instructor will appoint a student foreman on a rotation basis. All students will be responsible for tool lock-up and shop cleanup.

LUBBOCK CAMPUS GUIDELINES

CHILDREN ON CAMPUS

Many of the students attending classes at South Plains College - Lubbock Campus are also parents who value the opportunity to participate in higher education. Sometimes students are faced with the decision of whether to remain at home with their children, bring children with them to class, or be absent from class. The following guidelines address concerns for the safety of children on campus and provide for an environment conducive to learning.

CHILDREN IN THE CLASSROOM

Students are not allowed to bring children to class and will be asked to leave in the interest of providing an environment conducive for **all** students enrolled in the class. Students are responsible for adherence to the attendance requirements set forth by the instructor in the course syllabus.

UNATTENDED CHILDREN ON CAMPUS

Children may not be left unattended. In order to provide for the safety of children on campus, parents or other guardians are responsible for supervising children while utilizing services or conducting business on campus.

DISRUPTIVE CHILDREN

Disruptive children will not be allowed to interfere with college business. Parents or other guardians are responsible for supervising and controlling the behavior of children they have brought on campus.

Americans With Disabilities Act Statement

"Students with disabilities, including but not limited to physical, psychiatric or learning disabilities, who wish to request accommodations in this class should notify the Special Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Coordinator of Special Services. For more information, call or visit the Special Services Office in Rooms 113-C and 112, Reese Center Building 1, 885-3048, ext. 4654.

GENERAL SAFETY ON CAMPUS

South Plains College recognizes the importance of safety on campus. The protection of persons and property is a responsibility which we all share. Personal safety begins with the individual. The following guidelines are intended to assist you in protecting yourself and to encourage practices that contribute to a safe environment for our campus community.

- Never leave your personal property unsecured or unattended.
- Look around and be aware of your surroundings when you enter and exit a building.
- Whenever possible, avoid walking alone, particularly after dark. Walk to your vehicle with other class members or request that the Security Guard walk you to your car.
- When approaching your vehicle, keep your keys in your hand; look under your car and in the back seat and floorboard. Lock the doors as soon as you are inside your car.

FOOD AND DRINK IN CLASSROOMS

It is the policy of South Plains College not to permit food or drink in the classrooms or laboratories.

In case of emergency, contact the following numbers, but DO NOT leave a voice mail message:
747-0576, Ext. 4677 – ATC 885-3048, ext. 2923 – Reece Center (mobile 893-5705)

SCAN COMPETENCIES

C-1 **TIME** - Selects goal - relevant activities, ranks them, allocates time, prepares and follows schedules.
C-2 **MONEY** - Uses or prepares budgets, makes forecasts, keeps records and makes adjustments to meet objectives.
C-3 **MATERIALS AND FACILITIES** - Acquires, stores, allocates, and uses materials or space efficiently.
C-4 **HUMAN RESOURCES** - Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

INFORMATION - Acquires and Uses Information

C-5 Acquires and evaluates information.
C-6 Organizes and maintains information.
C-7 Interprets and communicates information.
C-8 Uses computers to process information.

INTERPERSONAL–Works With Others

C-9 Participates as members of a team and contributes to group effort.
C-10 Teaches others new skills.
C-11 Serves Clients/Customers–works to satisfy customer's expectations.
C-12 Exercises Leadership–communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
C-13 Negotiates-works toward agreements involving exchanges of resources; resolves divergent interests.
C-14 Works With Diversity–works well with men and women from diverse backgrounds.

SYSTEMS–Understands Complex Interrelationships

C-15 Understands Systems–knows how social, organizational, and technological systems work and operates effectively with them.
C-16 Monitors and Corrects Performance–distinguishes trends, predicts impacts on system operations, diagnoses systems performance and corrects malfunctions.
C-17 Improves or Designs Systems–suggests modifications to existing systems and develops new or alternative systems to improve performance.

TECHNOLOGY–Works With a Variety of Technologies

C-18 Selects Technology–chooses procedures, tools, or equipment, including computers and related technologies.
C-19 Applies Technology to Task–understands overall intent and proper procedures for setup and operation of equipment.
C-20 Maintains and Troubleshoots Equipment–prevents, identifies, or solves problems with equipment, including computers and other technologies.

FOUNDATION SKILLS

BASIC SKILLS–Reads, Writes, Performs Arithmetic and Mathematical Operations, Listens and Speaks

F-1 Reading–locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.

F-2 Writing–communicates thoughts, ideas, information and messages in writing and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.

F-3 Arithmetic–performs basic computations; uses basic numerical concepts such as whole numbers, etc.

F-4 Mathematics–approaches practical problems by choosing appropriately from a variety of mathematical techniques.

F-5 Listening–receives, attends to, interprets, and responds to verbal messages and other cues.

F-6 Speaking–organizes ideas and communicates orally.

THINKING SKILLS–Thinks Creatively, Makes Decisions, Solves Problems, Visualizes and Knows How to Learn and Reason

F-7 Creative Thinking–generates new ideas.

F-8 Decision-Making–specifies goals and constraints, generates alternatives, considers risks, evaluates and chooses best alternative.

F-9 Problem Solving–recognizes problems, devises and implements plan of action.

F-10 Seeing Things in the Mind's Eye–organizes and processes symbols, pictures, graphs, objects, and other information.

F-11 Knowing How to Learn–uses efficient learning techniques to acquire and apply new knowledge and skills.

F-12 Reasoning–discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

PERSONAL QUALITIES–Displays Responsibility, Self-Esteem, Sociability, Self-Management, Integrity and Honesty

F-13 Responsibility–exerts a high level of effort and perseveres towards goal attainment.

F-14 Self-Esteem–believes in own self-worth and maintains a positive view of self.

F-15 Sociability–demonstrates understanding, friendliness, adaptability, empathy and politeness in group settings.

F-16 Self-Management–assesses self accurately, sets personal goals, monitors progress and exhibits self-control.

F-17 Integrity/Honesty–chooses ethical courses of action.