COURSE SYLLABUS

COURSE TITLE: **INMT 1311-001 COMPUTER INTERGRATED MANUFACTURING**

INSTRUCTOR: **Rodney Busby**

OFFICE LOCATION **Lubbock Center, Room 132B / lab 132A Lubbock, Class room 133 Texas 79405**

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OFFICE HOURS: **1:00-3.00 pm Tues. & Thurs**.

SOUTH PLAINS COLLEGE IMPROVES EACH STUDENT'S LIFE

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Face covering statement added to all syllabi:

It is the policy of South Plains College for the Spring 2021 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation.

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All Safety Protocols for spring 2021 semester replicate fall 2020. Even if faculty/students have received COVID vaccines, mask are required until Dr. Satterwhite states otherwise.

· All students, faculty, and staff will be required to wear a face covering in all SPC buildings.

· All faculty, and staff should use the CampusShield software daily to take the Covid-19 self assessment.

· All students, faculty, and staff should monitor their health and notify appropriate personnel and their health provider if they experience any symptoms related to COVID-19.

· Everyone should be diligent in social distancing, hand washing, and covering coughs/sneezes.

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**.
   Fusion 360 tutorials

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. There will be a sign in sheet; it will be the student responsibility to sign each class.

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 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 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.

"Texas Senate Bill 11 (Campus Concealed Carry) **Concealed Carry of Handguns on Campus (BP)**

This Policy is intended to establish guidelines and procedures for the implementation of the state statute authorizing the concealed carry of handguns on the premises of South Plains College. These rules and regulations were established by the president of South Plains College in consultation with faculty, staff, and students and reviewed by the SPC Board of Regents.
This policy will become effective August 1, 2017 and is intended to be

in conformity with the requirements of Texas Government Code Section 411.2031.

POLICY/PROCEDURE

1. Definition
a. Campus – all land and buildings owned or leased by South Plains College as lessee.

b. Premises – a building or portion of a building.
c. Handgun license holder – an individual licensed to carry a concealed handgun under Subchapter H, Chapter 411 of the Texas Government Code ("Chapter 411"). Generally, such an eligible individual must be at least 21 years of age, not have a criminal record as defined by the code, and meet certain education and proficiency requirements. Chapter 411 contains some exceptions to the age requirement (e.g., ex-military personnel).
d. Concealed handgun – a handgun, the presence of which is not openly discernible to the ordinary observation of a reasonable person.
e. Exclusionary zone – any premise in which the carry of a concealed handgun is prohibited by virtue of Texas statute or these rules.
f. Secure Storage –a locked vehicle or a locked gun safe.

2. General Provisions
a. Subject to applicable Texas or federal laws and rules adopted by the College, individuals holding a valid Texas Concealed Handgun License (CHL) or the new state designation for the same, License to Carry (LTC), will be allowed to carry their handgun, concealed on their person, on the campus of South Plains College.

b. Pursuant to Texas Penal Code Sections 46.035 and 30.07, the open display of a handgun in plain view of another person on South Plains College property is never allowed except by an authorized individual such as a peace officer while in the actual discharge of his/her duty.

c. While South Plains College will employ all reasonable means to delineate exclusionary zones by signage in accord with Texas statutory law, it is the responsibility of the permit holder to know, understand,

and follow these rules and applicable laws while on the campus of South Plains College. Holders of such permits are bound by state and federal law and may face criminal or civil penalties for violation of those statutes.

d. Authorized permit holders are not required to disclose their concealed carry license status to anyone other than a law enforcement officer. The College will not maintain a list of concealed carry license holders. This information is not a matter of public record. South Plains College employees (other than law enforcement officer) may not, under any circumstances, require students or employees to disclose their concealed carry license status.

e. When not carried on or about a person, handguns must be in a locked personal vehicle or a locked gun safe. Guns safes must meet the following requirements: 1) be large enough to fully contain all firearms placed in it and provide for secure storage; 2) have exterior walls constructed of a minimum 16- gauge steel or equivalent; 3) have high-strength locking system consisting of a mechanical or electronic combination or biometric lock, and not a key lock; 4) be certified to/listed as meeting Underwriters Laboratories Residential Security Container rating standards by a Nationally Recognized Testing Laboratory (NRTL).

3. Specific Exclusions to Concealed Carry of a Handgun

a. Exclusionary zone – The College president is the only person with the authority to declare a specific premise or venue as an exclusionary zone. Therefore, except as provided herein, without the express written consent of the president, no faculty member, staff member, student, or student group may exclude a specific premise or venue as "off limits."

b. Exclusion by law – Texas statutes outside of Texas Government Code Section 411.2031 separately provide exclusions of certain premises or events, which provisions are hereby incorporated. Under such laws, concealed carry is prohibited from the following premises or locations:

• Where a high school, collegiate, or professional sporting event or interscholastic event is taking place, including SPC athletic events;
• Where any UIL sanctioned competition is being held;
• Where any Board of Regents meeting is being held;
• Where any other official governmental meeting or judicial or conduct proceeding is being conducted; and
• Where polling is being conducted for local, state, or federal elections.

c. Additional exclusions are as follows:
• The Natatorium

d. Other specific premises or venues may be declared "off limits" by the College president.
Adoption of exclusion for a premise or venue must be reasonably justified. The requestor must provide evidence that a concealed handgun on that particular premise or venue creates some special danger. Requests for exclusion must be provided in writing to the Office of the President at least 45 days prior to the date of the event.

e. To assist in the process of approving exclusions, a standing committee titled the Campus Carry Committee will be established. The committee will be charged with reviewing requests for exclusions and making a recommendation to the SPC president concerning the request. The chair and members of this committee will be appointed by the president and will include representatives from faculty, staff and the Student Government Association, as well as representatives from the Office of Student Affairs, the Office of Human Resources, and the South Plains College Police Department.

4. College Housing

Handgun license holders residing in SPC residence halls will be allowed to possess handguns on the premise provided that:

a.) Such possession is in compliance at all times with Texas statutory law and these rules; and
b.) The license holder stores his/her handgun(s) in a College-approved

gun safe (as defined in section 2e of this policy) or in a locked personal vehicle.
b. Students who are assigned to dorm rooms where a firearm is stored and who are concerned about their wellbeing may request a transfer to another room. Please refer to the College housing contract for specific provisions concerning possession of firearms in College housing.

5. Information to the College Community

South Plains College will widely distribute these rules and regulations and offer educational information regarding these rules and safety procedures to the students, staff, and faculty through the College's website, student and employee handbooks, and other publications. This policy will be reviewed in August of even numbered years by the President of SPC.

Approved by Board of Regents 3/09/2017

    I.

    J   Face Covering.

It is the policy of South Plains College for the Fall 2020 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation.

III.   COURSE OUTLINE

	I. After the first unit the student will have a general understanding of PCs and the DOS system and be able to:	
F1,2,5	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	
F1-5,7-13,16	be able to:	C5,7,15,19
	a. run a CAD program and perform basic drawing	
F1-5,7-12	functions.	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.

<div align="center">**LUBBOCK CAMPUS GUIDELINES**</div>

<div align="center">**CHILDREN ON CAMPUS**</div>

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.

<div align="center">**CHILDREN IN THE CLASSROOM**</div>

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.

<div align="center">**UNATTENDED CHILDREN ON CAMPUS**</div>

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.

<div align="center">**DISRUPTIVE CHILDREN**</div>

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.

<div align="center">**Americans With Disabilities Act Statement**</div>

> "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, Reece Center Building 1, 885-3048, ext. 4654.

<div align="center">**GENERAL SAFETY ON CAMPUS**</div>

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.

- ε   Never leave your personal property unsecured or unattended.
- ε   Look around and be aware of your surroundings when you enter and exit a building.
- ε   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.
- ε   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.

<div align="center">**FOOD AND DRINK IN CLASSROOMS**</div>

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-Manage-
      ment, 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.