

# TENTATIVE—SUBJECT TO CHANGE

# AMCA 2130 CNC Mill Programming

# COURSE SYLLABUS

**Spring Semester 2023 (202314)**

## Course information

Credit Hours/Minutes: 5/5250

Campus/Class Location: Swainsboro/6112

Class Meets: Monday, Tuesday, Wednesday, & Thursday / 3:00PM to 6:00PM

Course Reference Number (CRN): 40206

## Instructor contact information

Instructor Name: James Yearty

Email Address: James Yearty (jyearty@southeasterntech.edu)

Campus/Office Location: Swainsboro/6111

Office Hours: 11:30 to 12:30PM Monday Tuesday Wednesday & Thursday **“Due to the uncertainties of COVID-19, contact instructor by phone or email to make an appointment.”**

Phone: (478) 289-2323

Tutoring Hours (if applicable): Schedule with instructor as needed

## Southeastern Technical College (STC) Catalog and Handbook

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College’s [Catalog and Handbook](https://catalog.southeasterntech.edu/) (<https://catalog.southeasterntech.edu/>).

## REQUIRED TEXT

CNC Programming Workbook for Milling by camInstructor. ISBN: 978-1-897466-84-1

## REQUIRED SUPPLIES & SOFTWARE

Each student should have the following: Spiral notebook, pen, pencil, highlighter, 0-1 micrometer, 6” flexible rule, 0-6” dial caliper, pocket scriber, deburr tool, & safety glasses. You will not be permitted to borrow from the Instructor or your fellow classmates.

**Students should not share login credentials with others and should change passwords periodically to maintain security.**

## COURSE DESCRIPTION

Provides instruction for the safe operation and manual programming of computer numerical controlled (CNC) milling machines. Topics include: safety, calculation for programming, program codes and structure, program run and editing of programs.

## MAJOR COURSE COMPETENCIES

1. Safety
2. Programming Calculations
3. Program Codes and Structure
4. Program Run and Editing

## co-REQUISITE(S)

MCHT 1012 Print Reading for Machine Tool, CNC Fundamentals

## COURSE OUTLINE

Introduces students to Safety, Programming Calculations, Program Codes and Structure, and Program Run and Editing.

## GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

## STUDENT REQUIREMENTS

Tests and assignments must be completed on specified date. Students are also responsible for policies and procedures in the STC E-Catalog.

**COVID-19 MASK REQUIREMENT**

Regardless of vaccination status, students are highly encouraged to wear masks or face coverings while in a classroom or lab at Southeastern Technical College.  Masking may be implemented in some program areas (i.e. Health Sciences and Cosmetology) where students, faculty, and clients are in close proximity and social distancing cannot be maintained.  This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the educational process.  Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC).

**COVID-19 Signs and symptoms**

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician’s office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come on campus for any reason.

| **COVID-19 Key Symptoms** |
| --- |
| Fever or felt feverish  |
| Chills |
| Shortness of breath or difficulty breathing (not attributed to any other health condition) |
| Fatigue |
| Muscle or body aches |
| Headache |
| New loss of taste or smell |
| Sore throat (not attributed to any other health condition) |
| Congestion or runny nose (not attributed to any other health condition) |
| Nausea or vomiting |
| Diarrhea |
|  |
| **In the past 14 days, if you:** |
| Have had close contact with or are caring for an individual diagnosed with COVD-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s). |

**Covid-19 Self-Reporting Requirement**

Students, regardless of vaccination status, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using <https://www.southeasterntech.edu/covid-19/>. Report all positive cases of COVID-19 to your instructor and Stephannie Waters, Exposure Control Coordinator, swaters@southeasterntech.edu, 912-538-3195.

## ATTENDANCE GUIDELINES

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and also interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of “F” (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student’s last date of attendance in the event a student withdraws, stops attending, or receives an “F” in a course.

## STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

**Swainsboro Campus**:  Emily Jarrell ejarrell@southeasterntech.edu, 478-289-2259, Building 1, Room 1210.

**Vidalia Campus**: Helen Thomas, (hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

## **Specific Absences**

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

## **PREGNANCY**

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

**Swainsboro Campus**:  Emily Jarrell ejarrell@southeasterntech.edu, 478-289-2259, Building 1, Room 1210.

**Vidalia Campus**: Helen Thomas, (hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery **may not** be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

## Withdrawal Procedure

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of “W” (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of “F” (Failing 0-59) being assigned.

Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students’ eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be accessed due to the withdrawal. A grade of “W” will count in attempted hour calculations for the purpose of Financial Aid.

## **MAKEUP GUIDELINES** (Tests, quizzes, homework, projects, etc.)

Make up test will be at the discretion of the instructor.

## ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

## Procedure for Academic Misconduct

The procedure for dealing with academic misconduct and dishonesty is as follows:

1. **First Offense**

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

1. **Second Offense**

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

1. **Third Offense**

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

## **STATEMENT OF NON-DISCRIMINATION**

As set forth in the student catalog, Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, veteran status, or citizenship status (except in those special circumstances permitted or mandated by law).

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

| **American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer** | **Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer** |
| --- | --- |
| Helen Thomas, Special Needs SpecialistVidalia Campus3001 East 1st Street, VidaliaOffice 165 Phone: 912-538-3126Email: Helen Thomashthomas@southeasterntech.edu | Lanie Jonas, Director of Human ResourcesVidalia Campus3001 East 1st Street, VidaliaOffice 138B Phone: 912-538-3230Email: Lanie Jonasljonas@southeasterntech.edu |

## accessibility Statement

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

## GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College’s website.

## **ACCESS TO TECHNOLOGY**

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College (STC) Website](http://www.southeasterntech.edu/) ([www.southeasterntech.edu](http://www.southeasterntech.edu/)).

## Technical college system of georgia (tcsg) GUARANTEE/WARRANTY STATEMENT

*The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

## GRADING POLICY

| **Assessment/Assignment** | **Percentage** |
| --- | --- |
| Workbook Exercises | 25%  |
| Projects | 40%  |
| Final Project | 35% |

## grading scale

| **Letter Grade** | **Range** |
| --- | --- |
| A | 90-100 |
| B | 80-89 |
| C | 70-79 |
| D | 60-69 |
| F | 0-59 |

# AMCA 2130 CNC Mill Manual Programming

# Spring Semester 202314 Lesson Plan

**Subject to change**

| **Date/Week** | **Chapter/Lesson** | **Content** | **Assignments & Tests Due Dates** | **Competency Area** |
| --- | --- | --- | --- | --- |
| 1/9/23Day 1 |  | First day of class/Class Introduction—Syllabi, OutlineCNC Mill Manual Programming  |  | 1,2,3,4,a,b,c |
| 1/9/23Week 1 | Lesson 1 Absolute & Incremental PositioningLesson 2 Introduction to CNC codesLesson 3 Creating CNC Programs Lesson 4Drilling using canned cyclesLesson 5Drilling using canned cycles | CNC Programming Mill student workbook camInstructor | Class discuss & complete Exercises 1 thru 4Class discuss & complete CNC Part 1 page 17 Class discuss lesson 3 & 4Lesson 5 CNC part #2, #3, #4, exercises due by 1/12/23 for grade | 1,2,3,4,a,b,c |
| 1/17/23Week 2 | Lesson 6Straight line milling-linear interpolationLesson 7 & Lesson 8 Circular Interpolation | CNC Programming Mill student workbook camInstructor | Lesson 6 CNC part #7 & CNC part #8 create programs to machine contour.Lesson 8 CNC part #9 & CNC part #10 create programs to machine parts for grade due 1/19/23 | 1,2,3,4,a,b,c |
| 1/23/23Week 3 | Lesson 9 Circular InterpolationLesson 10 Cutter Compensation | CNC Programming Mill student workbook camInstructor | Lesson 9 CNC part #11 & CNC part #12 create programs to machine parts.Lesson 10 CNC part #13 & CNC part #14 create programs to machine parts for grade due 1/26/23 | 1,2,3,4,a,b,c |
| 1/30/23Week 4 |  | Retrieve print 101 from instructor | Project 101 due 1/31/23 | 1,2,3,4,a,b,c |
| 2/1/23Week 4 |  | Retrieve print 102 from instructor | Project 102 due 2/2/23 | 1,2,3,4,a,b,c |
| 2/6/23Week 5 |  | Retrieve print 103 from instructor | Project 103 due 2/7/23 | 1,2,3,4,a,b,c |
| 2/8/23Week 5 |  | Retrieve print 104 from instructor | Project 104 due 2/9/23 | 1,2,3,4,a,b,c |
| 2/13/23Week 6 |  | Retrieve print 105 from instructor | Project 105 due 2/14/23 | 1,2,3,4,a,b,c |
| 2/15/23Week 6 |  | Retrieve print 106 from instructor | Project 106 due 2/16/23 | 1,2,3,4,a,b,c |
| 2/20/23Week 7 |  | Retrieve print 107 from instructor | Project 107 due 2/21/23 | 1,2,3,4,a,b,c |
| 2/22/23Week 7 |  | Retrieve print 108 from instructor | Project 108 due 4/23/23 | 1,2,3,4,a,b,c |
| 2/27/23Week 8 |  | Instructor will Email instruction s for final once all Projects are complete | Final Project due 3/1/2023 | 1,2,3,4,a,b,c |
| **Live work may be substituted for any or all projects.** **All programs are to be saved on your flash drive and email to instructor.** |

## Competency Areas: (will vary for each course/taken from state standards)

1. Safety
2. Programming Calculations
3. Program Codes and Structure
4. Program Run and Editing

## General Core Educational Competencies:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.