

ACADEMIC AFFAIRS
Mission Statement, Program Outcomes, and Assessment
For Associate Degree in Machine Tool Technology

Mission Statement:

To provide education for citizens of Orangeburg and Calhoun Counties so that the graduate will have the skills, knowledge, and attitude necessary to effectively promote economic development by providing industrial manpower.

Program Outcomes:

Machine Tool Technology

Graduates with a degree in Machine Tool Technology should be able to demonstrate knowledge and skills in the following areas:

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| A. Perform Technical Math | MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, EGT 106, MAT 155 |
| B. Set-up and Operate Machine Shop Equipment | MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252 |
| C. Perform Tooling | MTT 111, MTT 112, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252 |
| D. Computer Operation | MTT 126, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, |

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Orangeburg-Calhoun Technical College

E. Build Basic Dies, Jigs, & Fixtures	HSS 101, CPT 170, ENG 160 MTT 123, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241
F. Read Blueprints	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252
G. Public Safety	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, WLD 102
H. Exhibit Professionalism	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, WLD 102, MAT 155, ECO 101 PSY 103, HSS 101, CPT 170, ENG 160, QAT 101
I. Communicate Effectively	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, WLD 102, MAT 155, ECO 101 PSY 103, HSS 101, CPT 170, ENG 160, QAT 101
J. Care for & Use Precision Measuring Instruments	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, EGT 106
K. Use Basic Welding Equipment	MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, WLD 102
L. Perform Basic Cutter-Grinding of Metal Working Tools	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241
M. Perform Basic Heat-Treatment Techniques	MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241

N. Operated Computerized Numerical Machine	MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241
O. Statistical Process Control	MTT 111, MTT 112, MTT 105, MTT 123, MTT 125, MTT 126, MTT, 141, MTT 145, MTT 221, MTT 222, MTT 224, MTT 232, MTT 241, MTT, 250, MTT 251, MTT 252, QAT 101

Assessment Methods:

Direct Student Learning Outcomes

This program has a capstone course, MTT 232, Tool and Die Making II. It includes direct assessment of student performance, including a series of projects that assess the student's overall understanding and physical abilities to perform all of the competencies in the program. In the past year 100% of all students attempting the capstone course completed with a C or better.

The students' academic knowledge and skill were validated through the "Work Keys Career Readiness Certification". The three areas that the students test in are "reading for information (RFI)", "applied mathematics (AM)", and "locating information (LI)". 100% of students tested received a 3 or better on the Work keys test.

Indirect Student Learning Outcomes

The Program faculty review the following indirect measures of student and program success yearly, or as needed, to ensure program viability: grade distribution and failure rates; student evaluations; job placement results; employer satisfaction survey; enrollment statistics; retention rates, and graduation rates.

Retention

OCtech Benchmark #1 – The program will have retained in the following Fall semester not less than 60% of the new students who enrolled in the prior Fall semester.

- Over the last three years, program retention has been: 2002 (100%), 2003 (100%), and 2004 (100%).

Job Placement

OCtech benchmark #2 – Using the State Technical College System definitions for employment, not less than 80% of the graduates of the program will have secured employment in the field.

- Over the past three years, job placement has been: 2001 (100%), 2002 (81.25%), and 2003 (100%)

Graduation Rates

OCtech benchmark #3 – The number of graduates will average 25% of the average annual fall enrollment for the program.

- Over the past three years, graduation rates have been: 2001-2002 (47.06%), 2002-2003 (43.48%), and 2003-2004 (42.86%).

Internal Measures of Success

Direct measures of soft skills and academic/program foundation skills:

- ACT Work Keys: Students will score a 3 or better on all areas of Work Keys.
- 90% of Capstone course students will achieve a grade of C or better.

Indirect measures of program success

- Maintain or exceed an 80% or better level of job placement.
- Reinstigate an Employer Satisfaction Survey to be implemented at the end of the Spring semester 2005.
- Maintain retention over the FY03-04 Benchmark.
- Incorporate 100% of validated DACUM competencies into Machine Tool course outlines with demonstrated student performances.

Review Process and Use of Results:

Machine Tool Technology is a competency-driven curriculum. Its competencies are determined through qualified DACUM panels and are validated by industry professionals and the curriculum's own advisory committee. DACUMS are usually conducted every four years to ensure currency with the last DACUM occurring May 2001. In between each DACUM the program faculty performs the following internal processes yearly as part of the strategic planning and review process.

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- Ensure that program outcomes are appropriate and current.
- Ensure that program outcomes are addressed in the exit competencies of at least one required course.
- Ensure that within those required courses that students demonstrate the desired program outcome either through written or performance-based tests and/or graded assignment.
- Ensure that equipment inventory, facilities, and budget support program outcomes and the strategic plan.

- Ensure that successful completion of prerequisite courses is a satisfactory predictor of student success in subsequent courses.
- Monitor student performances in the capstone course against DACUM competencies.
- Review grade distribution and failure rates; student evaluations; job placement results; employer satisfaction survey; enrollment statistics; retention rates, and graduation rates.
- Ensure that the College Library can assure access to appropriate and current research materials.
- Provide feedback to the general education faculty on observed general education competencies and make recommendations as needed.
- Make a report to the advisory committee on assessment findings and solicit feedback.
- Work with Division Dean and the Curriculum Committee to revise syllabi and/or course/department offerings as needed.
- Conduct program self study as required by accrediting agencies.

What action(s) did the Program take this past academic year that improved and expanded student-learning outcomes?

Changes have been made within the Machine Tool Technology program to improve student success based on recommendations from our advisory committee, instructors, and DACUM panel. The DACUM panel consists of members of local industry who would be in the positions to hire our graduates or hold the same types of jobs as our graduates. The Panel meets separately from the Advisory Committee to discuss the competency requirements of the program and make recommendations for changes.

Machine Tool Technology Actions

All benchmarks were successfully reached in the past year and local industry satisfaction remains high so no actions have been taken in program or DACUM areas. The MTT program instructors have begun learning techniques for online enhancements to individual courses. Several items including class notes and information has been placed on line to assist students outside the classroom. Also began working with the local technology center and COPE Technology center to expand our base of qualified applicants.