

Jones County Junior College
Career and Technical Education Division
Catalog Addendum
2008-2010

Addendum # 6
October 9, 2008

The following changes have been made to the curriculum of the Machine Tool Technology Program:

-Two new courses have been added to the course offerings. MST 2735- Introduction to CAD/CAM and MST 1625- Fundamentals of Geometric Dimensioning and Tolerancing have been added to the course offerings as electives.

-The number of semester hours has been increased for two courses: MST 2714 has been increased to MST 2715 and MST 2724 has been increased to MST 2725.

These changes will be effective Spring 2009.

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Machine Tool Technology
Technical Certificate Option

Freshman Year

First Semester Credit Hours

MST 1313 Machine Tool Math.....	3
MST 1413 Blueprint Reading.....	3
MST 1115 Power Machinery I.....	5
MST 1913 Precision Layout	3
LLS 1312 Orientation.....	2
Total Hours.....	16

Second Semester Credit Hours

MST 1125 Power Machinery II.....	5
Approved Technical Elective**.....(MST 1625 Fundamentals of G D&T).....	5
MST 1423 Adv. Blueprint Reading.....	3
Approved Technical Elective**.....(Metallurgy – MST 2813).....	3
Total Hours.....	16

(One year exit point for certificate option-preapproved by instructor)

Sophomore Year

First Semester Credit Hours

MST 2135 Power Machinery III.....	5
MST 2145 Power Machinery IV.....	5
Approved Technical Elective**.....(Jigs, Fixtures, & Tools TDT 2183).....	3
Approved Technical Elective**.....(Fundamentals of Die Making - TDT 1113).....	3
Total Hours.....	16

Second Semester Credit Hours

Approved Technical Elective**.....(MST 2735 Introduction to CAD/CAM).....	5
MST 2715 Comp. Num. Control I.....	5
MST 2725 Comp. Num. Control II.....	5
Total Hours.....	15

**Machine Tool Technology
Associate in Applied Science Option**

Freshman Year

First Semester Credit Hours

MST 1313 Machine Tool Math.....	3
MST 1413 Blueprint Reading.....	3
MST 1115 Power Machinery I.....	5
ENG 1113 English Comp .I.....	3
MAT 1313 College Algebra.....	3
LLS 1312 Orientation.....	2
Total Hours.....	19

Second Semester Credit Hours

MST 1125 Power Machinery II.....	5
Approved Technical Elective**(MST 1625 Fundamentals of G D&T).....	5
MST 1423 Adv. Blueprint Reading.....	3
ENG 1123 English Comp. II.....	3
Total Hours.....	16

Sophomore Year

First Semester Credit Hours

MST 2135 Power Machinery III.....	5
MST 2715 Comp. Num. Control Operations I.....	5
Approved Technical Elective**.....	6
SPT 1113 Public Speaking.....	3
Total Hours.....	19

Second Semester Credit Hours

MST 2145 Power Machinery IV.....	5
MST 2725 Comp. Num. Control Operations II.....	5
Approved Technical Elective**(MST 2735 Introduction to CAD/CAM).....	5
PSC 1113 American National Government or PSY 1513 General Psychology.....	3
Total Hours.....	18

*Students who lack entry-level skills in math, English, science, etc. will be provided related studies.

****Approved Technical Electives:**

- PLT 2213 Plastics Tooling Construction Principles
- MST 1625 Fundamentals of G D&T**
- MST 2735 Introduction to CAD/CAM**
- MST 2813 Metallurgy
- MST 291(1-3) Special Problems in Machine Tool Technology
- DDT 1313 Principles of CAD
- DDT 1114 Fundamentals of Drafting
- TDT 1114 Safety and Fundamentals of Die Fabrication
- TDT 2183 Jigs, Fixtures, and Tools
- WBL 191(1-5), 292(1-5), 293(1-5) Work Based Learning
- RCT 251 (1-6) Special Problem

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Machine Tool Technology

MST 1115 – Power Machinery I – A course in the operation of power machinery. Includes instruction and practice in the operation of lathes, drill presses, and vertical mills. Five semester credit hours: Two hours lecture and six hours lab.

MST 1125 – Power Machinery II – A continuation of Power Machinery I with emphasis on more advanced applications of lathes, mills, shapers, and precision grinders. Five semester credit hours: Three hours lecture and four hours lab.

MST 1313 – Machine Tool Mathematics – An applied mathematics course designed for machinists. Includes instruction and practice in algebraic and trigonometric operations essential for successful machining.

Three semester credit hours: Two hours lecture and two hours lab.

MST 1413 – Blueprint Reading – A course in blueprint reading designed for machinists. Includes instruction and practice in reading and applying industrial blueprints. Three semester credit hours: Two hours lecture and two hours lab.

MST 1423 – Advanced Blueprint Reading – A continuation of Blueprint Reading with emphasis on advanced features of technical prints. Includes instruction on the identification of various projections and views and on different assembly components. Three semester credit hours: Two hours lecture and two hours lab.

MST 1613 – Precision Layout – An introduction to the concepts and practice of precision layout for machining operations. Includes instruction and practice in the use of layout instruments. Three semester credit hours: One hour lecture and four hours lab.

MST 1625--Fundamentals of Geometric Dimensioning and Tolerancing—this course is designed to provide the students with a solid foundation in the fundamentals of geometric dimensioning and tolerancing. Includes emphasis on measurement theory, common terms and definitions, and profile tolerances, orientation tolerances, locational tolerances, runout tolerances and form tolerances as they relate to Machine Tool Technology. Five semester credit hours: Three hours lecture, Two hours lab.

MST 2135 – Power Machinery III – A continuation of the Power Machinery II with emphasis on advanced application of the engine lathe, milling machine, and grinding machine. Five semester credit hours: Three hours lecture and four hours lab.

MST 2145 – Power Machinery IV– A continuation of Power Machinery III with emphasis on highly advanced operations on the radial arm drill, milling machine, engine lathe, and precision grinder. Five semester credit hours: Three hours lecture and four hours lab.

MST 2715– Computer Numerical Control Operations I – An introduction to the application of computer numerical control (CNC) and computer assisted manufacturing (CAM) techniques and practices. Includes instruction and practice related to the use of the Cartesian coordinate system, programming codes and command, and tooling requirements for CNC/CAM machines. Five semester credit hours: Three hours lecture and four hours lab.

MST 2725 – Computer Numerical Control Operations II – A continuation of Computer Numerical Control I. Includes instruction in writing and editing CNC programs, and use

of CAM equipment to program and operate CNC machines. **Five** semester credit hours: **Three** hours lecture and four hours lab.

MST 2735-Introduction to CAD/CAM- This course is designed to provide the students with the fundamental knowledge and skills of Computer Aided Design and Computer Aided Manufacturing using various CAD/CAM software packages as they relate to Machine Tool Technology. **Five** semester credit hours: **Three** hours lecture and **two** hours lab.

MST 2813 –Metallurgy – An introduction to the concepts of metallurgy. Includes instruction and practice in metal identification, heat treatment, and hardness testing. **Three** semester credit hours: **One** hour lecture and four hours lab.

MST 291(1-3) – Special Problem in Machine Tool Technology – A course designed to provide the student with practical application of skills and knowledge gained in other Machine Tool Operation/Machine Shop courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience. **One to three** semester credit hours.