

**Certificate****MACHINE TOOL OPERATIONS**

The Machine Tool Operations program will prepare students to enter the exciting field of modern machine technology by providing them with the skills to run a machine shop and to operate specialized equipment. The purpose of this certificate is to prepare machine operators with the safe and efficient use of manufacturing implements such as lathes, milling machines, and grinders. The work of a machine operator affects the creation and quality of consumer goods; namely, anything with machine-made parts. Students will be trained in basic machine tool operations and the use of precision measuring instruments for entry-level production machine operation positions. Students enrolled in this program will be required to purchase measuring instruments and certain hand tools.

HGTC's Machine Tool Operations program was developed in response to regional employers who have expressed a demand for skilled employees with solid training in this specialized field. All courses with a grade of "C" or better, apply towards HGTC's Associate in Applied Science in Machine Tool Technology degree.

**CURRICULUM SEQUENCE****First Semester - Fall**

	<b>Course Title</b>	<b>Semester Credit Hours</b>
MAT 170	Algebra Trigonometry	3
MTT 101	Introduction to Machine Tool	2
MTT 106	Machine Tool Computer Applications	3
MTT 111	Machine Tool Theory and Practice I	5
MTT 120	Machine Tool Print Reading	3
	<b>TOTAL</b>	<b>16</b>

**Second Semester - Spring**

ENG 155	Communications I	3
MTT 105	Machine Tool Math Applications	3
MTT 112	Machine Tool Theory Practice II	5
MTT 130	Fundamentals of Geometric Dimensions and Tolerances	2
MTT 141	Metals Heat Treatment	3
	<b>TOTAL</b>	<b>16</b>

**Third Semester - Summer**

MTT 249	Introduction to CAM	3
MTT 250	Principles of CNC	3
	<b>TOTAL</b>	<b>6</b>
	<b>TOTAL CREDIT HOURS</b>	<b>38</b>

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