



# Manufacturing Welding Technician Diploma Program Course Requirements 2010-2011

*revised 3/29/10*

**Student Name** \_\_\_\_\_ **Student ID#** \_\_\_\_\_

**Course #**                      **Course Title**                      **Credits**      **Lecture Hrs**      **Lab Hrs**

**REQUIRED COURSES**

__ MDFT 1110	Intro to Parametric Modeling	2	1	2
__ MTRD 1160	CNC Setup and Operation	4	0	10
__ MTRD 1215	Intro to Milling Operations	3	1	4
__ MTRD 1221	Intro to Lathe Operations	2	0	4
__ MTRD 1265	CNC Programming and Process Planning	2	2	0
__ MTRD 2160	CAD/CAM	3	3	0
__ MTRD 2162	Workholding and Fixturing	3	1	4
__ MTRD 2221	CNC Milling Operations	5	1	8
__ MTRD 2223	CNC Turning Operations	2	1	2
__ RAST 1110	Intro to Manufacturing	2	2	0
__ RAST 2150	Introduction to Robot Operations	2	1	2
*** MATH 1500	Applied Mathematics	3	3	0
OR MASE 1109	Trade & Industry Math	2	2	0
And WELD 1350	Open Lab I	1		
__ MASE 1106	Intro to Electronics	2	1	2
__ WELD 1100	Intro to Welding	2	0	4
__ WELD 1101	Shielded Metal ARC Welding	5	1	8
__ WELD 1109	Shearing, Punching & Cutting Systems	1	1	0
__ WELD 1111	Blueprint Reading	2	1	2
__ WELD 1115	Gas Tungsten ARC Welding	3	1	4
__ WELD 1117	Gas Metal ARC Welding	3	1	4
__ WELD 1128*	Metal Fabrication	2	0	4
__ WELD 1130*	Advanced Welding Processes	2	0	4
__ WELD 1140	Trade Knowledge	2	2	0
	<b>Total</b>	<b>57</b>		

**GENERAL EDUCATION**

*Department Recommendation:*

__ COMP 1101	Computer Fundamentals	3	3	0
__ CCST 1530	Employment Strategies	3	3	0
	<b>Total</b>	<b>6</b>		

**ELECTIVES**

__ ELECTIVE		1		
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**GRADUATION REQUIREMENT**                      **64**

\*Denotes Prerequisites

\*\*\* Math class is determined by First Semester Emphasis (i.e., Machine Trades or Welding) If 1109 is taken student must take 1 credit of open lab (WELD 1350).

In order to receive a degree, diploma, or certificate from Central Lakes College, students must complete one-third of their credits at Central Lakes College. For programs exceeding 60 credits, a maximum of 20 semester credits must be completed at Central Lakes College.

**Evaluator** \_\_\_\_\_ **Date** \_\_\_\_\_



A COMMUNITY & TECHNICAL COLLEGE

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Course #	Course Title	Credits	Lecture Hrs	Lab Hrs
<b><u>BRAINERD COURSES</u></b>				
<b>FIRST SEMESTER</b>				
MASE 1106	Intro to Electronics	2	1	2
WELD 1100	Intro to Welding	2	0	4
WELD 1101	Shielded Metal ARC Welding	5	1	8
WELD 1109	Shearing, Punching & Cutting Systems	1	1	0
WELD 1117	Gas Metal ARC Welding	3	1	4
General Education		3		
<b>Total</b>		<b>16</b>		
<b>SECOND SEMESTER</b>				
WELD 1140	Trade Knowledge	2	2	0
MASE 1109	Trade & Industry Math	2	2	0
And WELD 1109 Open Lab OR		1	0	2
*** MATH 1500	Applied Mathematics	3	3	0
WELD 1111	Blueprint Reading	2	1	2
WELD 1115	Gas Tungsten ARC Welding	3	1	4
WELD 1128*	Metal Fabrication	2	0	4
WELD 1130*	Advanced Welding Processes	2	0	4
General Education		3		
<b>Total</b>		<b>17</b>		
<b><u>STAPLES COURSES</u></b>				
<b>FIRST SEMESTER</b>				
MDFT 1110	Intro to Parametric Modeling	2	1	2
MTRD 1160	CNC Setup and Operation	4	0	10
MTRD 1215	Intro to Milling Operations	3	1	4
MTRD 1221	Intro to Lathe Operations	2	0	4
MTRD 1265	CNC Programming and Process Planning	2	2	0
RAST 1110	Intro to Manufacturing	2	2	0
ELECTIVE		1		
<b>Total</b>		<b>16</b>		
<b>SECOND SEMESTER</b>				
MTRD 2160	CAD/CAM	3	3	0
MTRD 2162	Workholding and Fixturing	3	1	4
MTRD 2221	CNC Milling Operations	5	1	8
MTRD 2223	CNC Turning Operations	2	1	2
RAST 2150	Introduction to Robot Operations	2	1	2
<b>Total</b>		<b>15</b>		
<b>GRADUATION REQUIREMENT</b>		<b>64</b>		

\*Denotes Prerequisites

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