COURSE MODULES

Module	Name
1	Introduction to Mastercam
2	Mastercam Interface and Layout
3	Setting Up Your Part
4	Gnomon Control and Plane Creation
5	General Design
6	Chaining and Toolpath Parameters
7	Toolpath Setup and Creation

2 — MASTERCAM INTERFACE AND DESIGN

Competency	Objective	Cognitive	Importance	Difficulty
ML 2.1 — The student will demonstrate how Mastercam's World coordinate system and Mill-Turn's 2D systems work.		2		
	ML 2.1.1 — The student will describe the difference between Mill-Turn and mill coordinate systems.	2	2	3
	ML 2.1.2 — The student will describe how the +D+Z plane converts Mastercam to a 2D Mill-Turn coordinate system.	2	3	3
MA 2.2 — The student will create wireframe and solid geometry from a sketch and analyze entities.		2		
	ML 2.2.1 — The student will create a basic Mill-Turn part using wireframe.	2	1	2
	ML 2.2.2 — The student will analyze geometry to find diameters and lengths.	2	2	3
	ML 2.2.3 — The student will create a solid body using the Revolve tool.	1	2	2

3 — SETTING UP YOUR PART

Competency	Objective	Cognitive	Importance	Difficulty
ML 3.1 — The student will utilize features in Job Setup to provide project with setup information.		2		
	ML 3.1.1 — The student will align a part to the world coordinate system.	2	2	2
	ML 3.1.2 — The student will setup stock using Stock in Stock Setup.	2	2	2
	ML 3.1.3 —The student will setup chuck jaws using Chuck Jaws in Stock Setup.	2	2	2

4 — GNOMEN CONTROL AND PLANE CREATION

Competency	Objective	Cognitive	Importance	Difficulty
ML 4.1 —The student will create parametric tools in Mastercam.		2		
	ML 4.1.1 — The student will create a RH 80 Deg .016R LID using the Tool Manager.	2	2	2
	ML 4.1.2 — The student will create a .04 groove tool using the Tool Manager.	2	2	2
	ML 4.1.3 — The student will setup a tool on both left and right spindle using Tool Setup.	2	2	3
ML 4.2 — The student will create 3D tools in Mastercam.		3		
	ML 4.2.1 — The student will create a Mill-Turn tool assembly, that contains a 3d insert and holder, using the Tool Manager.	3	2	3

Competency	Objective	Cognitive	Importance	Difficulty
ML 4.2 — The student will create 3D inserts in Mastercam.		3		
	ML 4.2.1 — The student will create an assortment of 3D inserts using Tool Manager.	3	2	3
	ML 4.2.2 — The student will create a new 3D tool with newly created inserts and holders using Tool Manager.	3	2	3

5 — GENERAL DESIGN

Competency	Objective	Cognitive	Importance	Difficulty
ML 5.1 — The student will create left spindle turning operations.		3		
	ML 5.1.1 — The student will create a rough turning operation using the Rough toolpath.	3	3	2
	ML 5.1.2 — The student will create a Groove operation using the Groove toolpath.	3	3	2
	ML 5.1.3 — The student will create a Threading operation using the Thread toolpath.	3	3	2

6 — CHAINING AND TOOLPATH PARAMETERS

Competency	Objective	Cognitive	Importance	Difficulty
ML 6.1 — The student will create left spindle C-axis operations.		3		
	ML 6.1.1 — The student will create a C-axis Cross Contour operation using the Cross Contour toolpath.	3	2	3
	ML 6.1.2 — The student will create a Cross Drill operation using the Cross Drill toolpath.	3	2	3
	ML 6.1.3 — The student will create a Face Contour operation using the Face Contour toolpath.	3	2	3

7 — TOOLPATH SETUP AND CREATION

Competency	Objective	Cognitive	Importance	Difficulty
ML 7.1 — The student will create Part handling operations.		3		
	ML 7.1.1 — The student will create a Stock Flip operation using the Stock Flip toolpath.	3	3	3
	ML 7.1.2 — The student will create a Tailstock operation using the Tailstock toolpath.	3	3	2
	ML 7.1.3 — The student will create a Stock Advance operation using the Stock Advance toolpath.	3	2	2

MC
Mastercam
CERTIFICATION