

MODULE CON2180: WOOD FORMING

Level: Intermediate

Theme: Manufacturing Systems (Processes and Applications)

Prerequisite: CON1120 Project Management

Module Description: Students apply skills in mold making and wood conditioning to make a formed part or component.

Module Parameters: Access to a woodworking or materials facility and to instruction from an individual with specialized training in woodworking.

Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> describe common wood forming techniques 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> a written or oral response that correctly identifies describes three wood forming techniques. <p><i>Assessment Tool</i> <i>Response Assessment, Bending and Laminating, CON2180-1</i></p> <p><i>Standard</i> <i>Response rating of 2</i></p>	10
<ul style="list-style-type: none"> build or obtain the necessary molds and clamping devices to bend a piece of solid stock or wood laminate 	<ul style="list-style-type: none"> construction/set-up of tools required to bend a piece of solid or laminated stock. <p><i>Assessment Tool</i> <i>Product Assessment: Wood Formed Products, CON2180-2</i></p> <p><i>Standard</i> <i>Molds allow for even application of pressure and protect surface from unnecessary blemishes</i> <i>Performance rating of 2 for each applicable task</i></p>	20
<ul style="list-style-type: none"> apply wood forming skills and techniques to make a product or component 	<ul style="list-style-type: none"> application of wood forming techniques and skills to create a product with one or more formed components. <p><i>Assessment Tool</i> <i>Project Assessment: Wood Formed Products, CON2180-2</i></p> <p><i>Standard</i> <i>The appropriate materials are selected and bent accurately so as to provide a tight fit to all adjoining components. An individual product is accurate to the original design</i> <i>Performance rating of 2 for each applicable task</i></p>	70

MODULE CON2180: WOOD FORMING (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> observations of individual effort and interpersonal interaction during the learning process. <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
<p>Orientation</p> <ul style="list-style-type: none"> Forming Techniques Forming Materials 	<p><i>The student should:</i></p> <ul style="list-style-type: none"> research and describe typical methods of bending solid stock and laminates; such as soaking in water, steaming or chemical conditioning describe how to determine the correct spacing for cross and parallel kerfing describe a system to moisten or steam wood (plasticize) prior to bending identify woods that lend themselves to cold water or steam bending identify methods of building up – molding and clamping veneer stock select the most appropriate adhesive for a given application and process. 	<p>Discuss the inherent dangers associated with the use of steam.</p>
<p>Planning and Management</p> <ul style="list-style-type: none"> Design Material 	<ul style="list-style-type: none"> select or design a formed product or component calculate the spacing of kerfs for a given radius bend design a mold for bending or contouring solid stock obtain suitable stock for bending. 	<p>Products might include:</p> <ul style="list-style-type: none"> furniture components recreational equipment marine structures.

MODULE CON2180: WOOD FORMING (continued)

Concept	Specific Learner Expectations	Notes
<p>Implementation</p> <ul style="list-style-type: none"> • Material Processing 	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • use the appropriate tools, materials and processes to: <ul style="list-style-type: none"> – prepare solid and/or veneer stock for bending – condition, glue and secure – release and finish. 	<p>Discuss the importance of using stock that is free from knots and cross-grained sections.</p>
<p>Assessment</p> <ul style="list-style-type: none"> • Career Preparation 	<ul style="list-style-type: none"> • maintain a record of completed activities within a portfolio. 	

