

## DET2248 - CNC Applications

Credits:	3 (2/1/0)
Description:	The objective of this course is to develop students' knowledge of computer numerical control system components, programming codes for linear and circular interpolation and basic CAD/CAM integration.
Prerequisites:	<ul style="list-style-type: none"> <li>• DET1114</li> <li>• DET2200</li> <li>• DET2210</li> </ul>
Corequisites:	
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> <li>1. Interpret machine axis movements in the X, Y and Z planes.</li> <li>2. Analyze and apply point-to-point programming to generate linear interpolation toolpaths.</li> <li>3. Analyze and apply continuous path programming to generate circular and linear interpolation toolpaths.</li> <li>4. Utilize incremental programming modes to generate code sequences for toolpaths.</li> <li>5. Utilize absolute programming modes to generate codes sequences for toolpaths.</li> <li>6. Write comprehensive linear interpolation programs for part toolpathing.</li> <li>7. Write comprehensive circular interpolation programs for part toolpathing.</li> <li>8. Utilize a virtual computer numerical control environment to analyze programs for functionality, correct toolpathing and interference checks.</li> <li>9. Utilize CAD/CAM software to generate part toolpathing for three-axis machining.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.