This rubric is to be used for assessing the PMT 280-2 programming project in the PMT 276 class. For this project students must correctly generate the part geometry, locate the part work coordinate system as it relates to the machine, assign the correct roughing and finishing toolpaths, assign the correct cutting parameters for each toolpath, and generate the correct nc code for the machine being used.

Please refer to the PMT 280-2 video lecture for an in depth overview of this assignment

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| **Skill Set** | **Exemplary** | **Proficient** | **Developing** | **Not Yet Competent** |
| **Part Geometry** |  | | |  |
| Part is correctly oriented relative to the machine WCS | 15  Part is located in the program as it would be on the machine | 0  Part is not located in the program as it would be on the machine | 0  Part is not located in the program as it would be on the machine | 0  Part is not located in the program as it would be on the machine |
| Part has correct levels | 10  3 correct levels with correct geometry on each level | 7  3 correct levels, geometry may be on wrong level | 5  2 correct levels, geometry on wrong level | 0  No assigned levels |
| **Toolpaths** |  | | |  |
| Correct roughing toolpath is assigned to the part | 20  - correctly assigned roughing tool path  - roughing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 15  One of the following may be incorrect:  - correctly assigned roughing tool path  - roughing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 10  Two of the following may be incorrect:  - correctly assigned roughing tool path  - roughing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 5  None of the following are correct:  - correctly assigned roughing tool path  - roughing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected |
| Correct Finishing toolpath is assigned to the part | 20  -correctly assigned finishing tool path  -finishing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 15  One of the following may be incorrect:  -correctly assigned finishing tool path  -finishing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 10  Two of the following may be incorrect:  -correctly assigned finishing tool path  -finishing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 5  None of the following are correct:  -correctly assigned finishing tool path  -finishing parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected |
| Correct engraving toolpath is assigned to the part | 20  - correctly assigned engraving tool path  -engraving parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 15  One of the following may be incorrect:  - correctly assigned engraving tool path  -engraving parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 10  Two of the following may be incorrect:  - correctly assigned engraving tool path  -engraving parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected | 5  None of the following are correct:  - correctly assigned engraving tool path  -engraving parameters are correctly set  -speeds and feeds are correct  -correct cutting tool was selected |
| **NC File** |  | | |  |
| Correct Post Processor is used | 15  The correct post processor was chosen for the machine that the part will be made on | 10  The incorrect post processor was chosen for the machine that the part will be made on but the code will still work | 0  The incorrect post processor was chosen for the machine that the part will be made on | 0  The incorrect post processor was chosen for the machine that the part will be made on |
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