MTT221 Bench Work Syllabus

Course Information

Credits
1
Campus
Washburn Institute of Technology
Address
5724 SW Huntoon
City/State/Zip
Topeka, Kansas 66604
Office Fax
785-273-7080

Description
Students will be provided the opportunity to learn and practice bench work skills such as filing, drilling, tapping, deburring and layout for projects. They will gain valuable practical experience in the use of various hand tools by producing basic bench work projects. Topics will include safety, print reading, job planning, and quality control.

Textbooks


Student Learning Outcomes:
A. Communicate effectively
B. Integrate technology
C. Learn effectively
D. Demonstrate cooperative teamwork skills
E. Apply safety in the workplace
F. Think critically and creatively
G. Demonstrate responsible work ethics

Competencies
1. Conduct job hazard analysis for hand tools.
2. Conduct job hazard analysis for power tools.
3. Select hand tools for assigned tasks.
4. Select power tools for assigned tasks.
5. Lay out parts for machining using semi-precision and precision lay out practices.
6. Drill holes using electric and pneumatic drills.
7. Maintain pedestal grinders.
8. Saw stock to length
9. Sharpen drill bits and lathe tools.
10. Use free hand saws to cut angles and remove material.
11. Maintain radial arm and sensitive drill press.
12. Finish parts using electrical and pneumatic tools.
13. Use a press to insert bushings, bearings and pins.
14. Broach internal key ways.

Guidelines for Success

Assessment Plan
Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution’s technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

Grading Rationale and Grading Scale
Grading is based on the quality of shop assignments, attendance, tests and quiz scores.

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>80% - 89%</td>
<td>B</td>
</tr>
<tr>
<td>70% - 79%</td>
<td>C</td>
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<tr>
<td>60% - 69%</td>
<td>D</td>
</tr>
<tr>
<td>Below 60%</td>
<td>F</td>
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The minimum acceptable passing grade is C. The total grade will be calculated using the following formula: Attendance = 10%, shop assignments = 30%, tests = 20% and quizzes = 10%, Semester final = 30%. 100% attendance adds 5% to the final score, less than 90% attendance deducts 5% from the final score.

Attendance
Attendance is required. Please see instructor for make-up policy for excused and school related absences.
**Disability**

The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate for eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Special Support Services Coordinator  
Phone: 785-228-6356  
E-Mail: ssscoordinator@washburn.edu