SMP - SHEET METAL AND PLASTICS TECHNOLOGY

liaison: Danny Aiu  (845-9237, aiud@hawaii.edu)

website: www.honolulu.hawaii.edu/smp

faculty: Danny Aiu

program mission: The Sheet Metal & Plastics Technology program’s mission is to serve the community as a learning-centered, open door program that provides technical training to meet the demands of the sheet metal and plastics industry and the needs of the individual. An open-exit option allows the students to identify their career objectives and participate in program exploration.

program description: This curriculum is designed to qualify students for entry into the field of sheet metal as apprentices. They will develop skills in fabricating air conditioning ducts; architectural metal work; welding and fabricating plastics; and, pattern development.

program learning outcomes (PLOs): Upon successful completion of the SMP program, students will be able to:

• Identify and properly use personal safety equipment.
• Understand the need for safety equipment in the shop and field.
• Show proper use and care of sheet metal hand tools.
• Identify the proper use, care and safety concerns of shop equipment.
• Produce orthographic drawings for items requiring fabrication.
• State the three forms of metal fabrication.
• Produce basic fitting layout using any of the three methods.
• Identify the base rules for order of operation in fabrication.
• Layout, cut, notch, and bend in proper order, various fittings / components using sheet metal and plastic.
• Identify the different gauges of sheet metal, forming methods, and connection processes after lay out.
• Identify and install common fasteners used in sheet metal work.
• Properly mix and apply acids used in soldering.
• Produce soldering joints on galvanized iron.
• Identify Air Conditioner duct work fittings, their uses, connection types, and fabrication methods.
• Explain the use of Short-cut layout methods and when they apply.

program requirements:

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<thead>
<tr>
<th>First Semester</th>
<th>Certificate of Achievement Credits</th>
<th>Associate in Applied Science Degree Credits</th>
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</thead>
<tbody>
<tr>
<td>SMP 20 Hand Tool and Machine Processes</td>
<td>4</td>
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<tr>
<td>SMP 21 Shop Problems</td>
<td>3</td>
<td>3</td>
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<tr>
<td>SMP 22 Fabrication Processes (Architectural)</td>
<td>4</td>
<td>4</td>
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<tr>
<td>SMP 23 Introduction to Surface Development</td>
<td>2</td>
<td>2</td>
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<tr>
<td>MATH 150 Technical College Mathematics</td>
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<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Certificate of Achievement Credits</th>
<th>Associate in Applied Science Degree Credits</th>
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<tbody>
<tr>
<td>SMP 24 Advanced Fabrication Processes (Architectural)</td>
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<tr>
<td>SMP 25 Air Conditioning Fabrication</td>
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<td>4</td>
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<tr>
<td>SMP 26 Pattern Development I</td>
<td>2</td>
<td>2</td>
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<td>BLPR 22 Blueprint Reading</td>
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<tr>
<td>ENG 100 Composition I</td>
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Career & Technical Programs - SMP

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>WELD 19</td>
<td>Welding for Trades and Industry (for Non-majors)</td>
<td>3</td>
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<td>19</td>
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**Third Semester (See Substitution note below)**

- SMP 41     Advanced Air Conditioning Fabrication  4
- SMP 43     Pattern Development II               2
- General Education Requirement *               3
- General Education Requirement *               3

**Fourth Semester (See Substitution note below)**

- SMP 44     Blow Pipe Fabrication                4
- SMP 45     Advanced Fabrication (General)      4
- SMP 46     Pattern Development III             2
- SMP 49     Advanced Shop Problems              2
- General Education Requirement *               3

**Minimum Credits Required**

- Total Credits Required: 29 62

* General Education Requirements for the AAS degree are listed under DEGREES AND CERTIFICATES.

**Note:** Students must also meet the proficiency requirements in communication established by Honolulu CC to qualify for the Certificate of Achievement.

**Note:** Second year coursework will be offered if sufficient enrollment exists. (Industry offers employment to students upon completion of first year.)

**Substitution:** If Honolulu CC does not offer a third or fourth semester course in the normal sequence, Cooperative Education (SMP 93V) will substitute up to the credits of the required course(s) not scheduled.

**Cost of Textbooks/Supplies:** The cost of tools, instruments, and textbooks is approximately $625.

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**Sheet Metal Trade Advisory Committee:**

- Jackson Cheng, Sheet Metal Contractors Association
- Roger Nagata, Administrator, Hawai‘i Sheet Metal Workers Training Fund
- Rick V. Paulino, President and Business Representative, SMWIA Local 293
- Leo Peralta, Training Coordinator, Hawaii Sheet Metal Workers Training Fund
- Brian Sen, Sheet Metal Contractors Association
- Arthur Tolentino, Business Manager/Financial Secretary, SMWIA Local 293

**College Advisory Committee:**

- Danny Aiu, Instructor, Honolulu CC Sheet Metal and Plastics Program
- Douglas Boettner, Vice Chancellor of Administrative Services
- Fumiko Takasugi, Interim Dean of Transportation and Trades Division
- Erika Lacro, Chancellor
- Bert Shimabukuro, Division Chair of Transportation and Trades Division