Collection Development Policy
Mechanical Engineering

Statement of Purpose and Library Needs:

Mechanical engineering involves the production, transmission, and use of mechanical power. Mechanical engineers design, test, and operate all kinds of machines. They also design and develop a wide range of engines that produce power from a multitude of energy sources. Automobiles, heating, ventilation, and air conditioning equipment, industrial processing equipment, and machine tools are but a few of the machines that use power which are developed by mechanical engineers.

Students completing degrees in mechanical engineering take course work in the following disciplines: thermodynamics, heat transfer, instrumentation and measurement, energy conversion systems, solid and fluid mechanics, hydrodynamics, aerodynamics, machine analysis and design, mechanical design, robotics, composites, internal combustion engines, manufacturing processes, and controls.

The Department of Mechanical Engineering offers the Bachelor of Science in Mechanical Engineering and graduate programs leading to the M.S. and Ph.D. in Mechanical Engineering. The Master of Science in Engineering, the Master of Science in Mechanical Engineering, and Master of Mechanical Engineering are also administered by the department.

The Department of Mechanical Engineering conducts advanced research in a wide array of subjects, as follows: heat transfer, heat exchangers, transport in thin liquid films, thermal energy storage, space power systems, composite materials, bridge assemblies, and vibration.

The library endeavors to develop and maintain a collection that will satisfy the need for resources that support the undergraduate and graduate curriculum in mechanical engineering, as well as meet many of the more specialized demands from graduate students and faculty for advanced research materials.

I. COLLECTION AREAS

A. Area: Mechanical Engineering

B. Classes and Levels

<table>
<thead>
<tr>
<th>LC Class</th>
<th>Description</th>
<th>Current Collection</th>
<th>Collection Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA357-359</td>
<td>Fluid Mechanics</td>
<td>3c</td>
<td>4</td>
</tr>
<tr>
<td>TA418.9C6</td>
<td>Composite Materials</td>
<td>3c</td>
<td>4</td>
</tr>
<tr>
<td>TJ1-1570</td>
<td>Mechanical Engineering</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>TL1-724</td>
<td>Motor Vehicles and Aeronautics</td>
<td>3c</td>
<td>3c</td>
</tr>
<tr>
<td>TL4000-4050</td>
<td>Astronautics and Ground Support</td>
<td>3c</td>
<td>3c</td>
</tr>
<tr>
<td>TP363</td>
<td>Heat Exchangers</td>
<td>3c</td>
<td>4</td>
</tr>
</tbody>
</table>

3c = Advanced study or instructional level. Supports master's degree level program
4 = Research level. Supports doctoral level programs and other original research

C. Scope of Coverage
1. Chronological Guidelines

Emphasis is on acquiring materials dealing with current technology; items dealing with older or outdated technology are acquired selectively, generally through gifts and donations.

2. Geographic Guidelines

There are no geographic limits governing the selection of materials in this discipline.

3. Date of Publication Guidelines

Emphasis is placed on the acquisition of current imprints. Older imprints are acquired selectively according to specified collection intensity levels.

4. Language Guidelines

English is the primary language of the collection. Other languages will be acquired selectively.

D. Types of Materials Collected

1. Treatment of Subject

Emphasis is on maintaining a robust selection of journals in mechanical engineering and developing a strong research monographic collection representing the important trade and professional presses. Conference proceedings, technical reports, dissertations, reference works, and graduate and advanced undergraduate texts are acquired selectively. Audio-visual materials and datasets are acquired selectively.

2. Format

Print resources prevail, although an increasing number of current imprints are accompanied by diskettes and CD-ROMs. Full-text electronic journals are continuously added to the virtual library. These are acquired through package arrangements with publishers, or through electronic upgrades of current subscriptions. (Note: Cancellation of a print subscription for which there is an electronic, full-text equivalent is encouraged and will follow the guidelines set forth in the document Selection of Resources for the Virtual Library.) Audio visual presentations on laboratory procedures and field operations may be selected for purchase. The same holds true for specialized datasets, with the understanding that these resources become the permanent property of the library with no restrictions on who may use them.

II. ACQUISITIONS STRATEGY

Mechanical engineering materials are selected by the Collection Development Librarian assigned to the department, with priority given to faculty requests. The library maintains a well-established approval plan for most trade and professional presses of interest to the department, and has current subscriptions to all American Society of Mechanical Engineers journals. Retrospective purchases are done at faculty request or to replace items lost through theft and damage. Since funding is very limited for new subscriptions, access to articles in journals that are not owned by the library is routinely handled through fee-based document delivery services and inter-library loan. The library encourages faculty to periodically review their journal subscriptions and to cancel titles that are no longer of interest or value. The library occasionally receives donations of mechanical engineering journals and monographs from faculty and the community. When it is appropriate to do so, donated materials are added to the collection.

III. COLLECTION NOTES

Upper level undergraduate texts are acquired selectively. Theses and dissertations from other institutions are
generally not collected unless they are specifically requested by the faculty. Popular technology items are excluded. Works dealing primarily with the topic of automatic control are acquired selectively.

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