INDUSTRIAL DISTRIBUTION - BS

Overview
Industrial Distribution prepares graduates for sales engineering, technical sales, supply chain management, operations management, sales management and other managerial positions. Students are prepared for employment in industry segments that include: aerospace; automation solutions; building materials; chemical and petrochemical; electrical; electronics; information systems and technology; healthcare; fluid power; general line; heating, ventilation and air conditioning; management consulting; mechanical power; metals; oil and gas; plastics; pipe, valve, and fitting; plumbing; safety equipment; semiconductor; specialty tools; and welding. The day-to-day challenges faced by the industrial distributor or the manufacturer’s representative require the person to be a professional with many capabilities. To fulfill this demand, the curriculum provides study in business, communications, finance, information technology, applied technology, general management, engineering, ethics, and human relations. This knowledge is applicable to the graduate in relationships with executives, managers, engineers, scientists, and business analysts while taking leadership roles in their manufacturing, distribution, analysis, service, production planning and maintenance or construction operations. The industrial distribution graduate assists these preceding entities by direct application of operations, business, and product knowledge. Essentially the industrial distribution graduate becomes a consultative resource to businesses - a challenging and rewarding career that can lead to the possibility of becoming a business leader in multiple segments. Graduates receive the Bachelor of Science degree in Industrial Distribution.

Mission
Industrial Distribution has as its mission to:

• Prepare graduates for sales engineering, sales management, supply chain operations and logistics management mid-management positions with wholesale distributors, who purchase, warehouse, sell, distribute and service a wide variety of products, and with manufacturers who sell through distributors,
• Conduct applied research and develop new best practices in industrial distribution, logistics, and supply chain management that mutually benefit the university and its industrial, governmental, and academic collaborators,
• Provide service and leadership in the promotion and advancement of the department, the university and the industrial distribution profession.

Program Educational Objectives
The Industrial Distribution Program at Texas A&M has as its program educational objectives to produce graduates who, after three to five years:

• Possess the technical and managerial skills to have successful careers in designing, integrating, and implementation of technical sales, operations, and customer services management systems in industrial distribution and supply chain management related industries.
• Exhibit a commitment to professional ethics in their professional career.
• Demonstrate increasing levels of leadership and responsibility during their careers.
• Display a desire for life-long learning and sustainable productivity in a dynamic work environment.

Program Requirements
The freshman year is identical for degrees in aerospace engineering, biomedical engineering, civil engineering, computer engineering, computer science, electrical engineering, electronic systems engineering technology, industrial distribution, industrial engineering, manufacturing and mechanical engineering technology, mechanical engineering, multidisciplinary engineering technology, nuclear engineering, ocean engineering, and petroleum engineering (Note: not all programs listed are offered in Qatar). The freshman year is slightly different for chemical engineering in that students take CHEM 119 or CHEM 107/CHEM 117 and CHEM 120. Biomedical Engineering also requires a two semester sequence of chemistry courses consisting of CHEM 119 or CHEM 107/CHEM 117 and CHEM 120. Students pursuing degrees in biological and agricultural engineering should refer to the specific curriculum for this major. It is recognized that many students will change the sequence and number of courses taken in any semester. Deviations from the prescribed course sequence, however, should be made with care to ensure that prerequisites for all courses are met.

First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 107 General Chemistry for Engineering Students</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 117 General Chemistry for Engineering Students Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ENGL 103 or ENGL 104 Introduction to Rhetoric and Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 102 Engineering Lab I - Computation</td>
<td>2</td>
</tr>
<tr>
<td>MATH 151 Engineering Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>University Core Curriculum (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum</a>)</td>
<td>3</td>
</tr>
<tr>
<td>Semester Credit Hours</td>
<td>16</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Spring</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 120 Fundamentals of Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 216/PHYS 216 Experimental Physics and Engineering Lab II - Mechanics</td>
<td>2</td>
</tr>
<tr>
<td>MATH 152 Engineering Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 206 Newtonian Mechanics for Engineering and Science</td>
<td>3</td>
</tr>
<tr>
<td>University Core Curriculum (<a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum</a>)</td>
<td>3-6</td>
</tr>
<tr>
<td>Semester Credit Hours</td>
<td>15-16</td>
</tr>
<tr>
<td>Total Semester Credit Hours</td>
<td>31-32</td>
</tr>
</tbody>
</table>

1 A grade of C or better is required.
2 Entering students will be given a math placement exam. Test results will be used in selecting the appropriate starting course which may be at a higher or lower level.
University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum)\(^3,6\)

**Spring**
- ENTC 399 High Impact Experience\(^8\) 0
- ESET 300 Industrial Electricity\(^1\) 4
- IDIS 344 Distributor Information and Control Systems \(^1\) 4
- MMET 301 Mechanical Power Transmission\(^1\) 3
- Directed elective \(^7\) 3
- Technical elective \(^7\) 3

Semester Credit Hours 17

**Fourth Year**

**Fall**
- ESET 400 Industrial Automation\(^1\) 4
- IDIS 424 Purchasing Applications in Distribution\(^1\) 3
- IDIS 433 Industrial Sales Force Development\(^1\) 3
- IDIS 464 Distributor Operations and Financial Management\(^1\) 3
- MMET 401 Fluid Power Transmission\(^1\) 3

Semester Credit Hours 16

Total Semester Credit Hours 95

\(^3\) Of the 18 hours shown as University Core Curriculum electives, 3 must be from creative arts, 3 from social and behavioral sciences (see IDIS curriculum for more information), 6 from American history and 6 from government/political science. The required 3 hours of international and cultural diversity and 3 hours of cultural discourse may be met by courses satisfying the creative arts, social and behavioral sciences and American history requirements if they are also on the approved list of international and cultural diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements) courses and cultural discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements) courses.

\(^4\) BMEN, CHEN and MSEN require 8 hours of freshman chemistry, which may be satisfied by CHEM 119 or CHEM 107/CHEM 117 and CHEM 120; Credit by Examination (CBE) for CHEM 119 or CHEM 107/CHEM 117 plus CHEM 120; or 8 hours of CBE for CHEM 119 or CHEM 107/CHEM 117 and CHEM 120. BMEN, CHEN and MSEN should take CHEM 120 second semester freshman year. CPSC students may take CHEM 119 or CHEM 107. CHEM 120 will substitute for CHEM 107.

\(^5\) For BS-PETE, allocate 3 hours to core communications course (ENGL 210, COMM 203, COMM 205, or COMM 243) and/or 3 hours to UCC elective. For BS-MEEN, allocate 3 hours to core communications course (ENGL 203, ENGL 210, or COMM 205) and/or 3 hours to UCC elective.

\(^6\) Students in Industrial Distribution satisfy the 3 hour social and behavioral sciences by taking ECON 202 as a required course. Instead, IDIS students must take a 3 hour course from the Language, Philosophy, and Culture list. They may also use this course to satisfy one of their ICD courses.

\(^7\) See a departmental advisor for a list of acceptable directed electives and technical electives.

\(^8\) All students are required to complete a high-impact experience in order to graduate. The list of possible high-impact experiences is available in the ETID advising office.

The curriculum lists the minimum number of classes required for graduation. Additional courses may be taken.

**Total Program Hours 126**