The Technical Certificate (T.C.) in Pneumatics, Hydraulics and Motors for Manufacturing focuses on motor and controls, hydraulics, mechanical systems, and drive and pumps.

Articulation
This certificate articulates directly into the Engineering Technology (Advanced Manufacturing (2320) (A.S.) degree. Contact an advisor to determine the career education path that is best for you.

Important for You to Know
This academic roadmap does not include developmental education courses in reading, writing, and/or mathematics that you may be required to take. Students who place into developmental education courses are required to complete designated developmental education courses with a grade of C or higher regardless of program of study. In addition, it does not include MAT 1033: Intermediate Algebra, which, for many students, is a prerequisite course for MAC 1105.

Advising
(904) 598-5618 or amt@fscj.edu.

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Sample Roadmap
This roadmap provides general guidance about required courses. For specific guidance about your individual academic degree plan, please see an advisor. Also refer to the College Catalog and class schedules for additional information. These courses can be taken in any order. A minimum grade of C or higher must be achieved in all professional courses.

Term 1

<table>
<thead>
<tr>
<th>Course: Course Title</th>
<th>Credit Hours</th>
<th>Terms Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETM 2315C: Mechanical Devices and Systems</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>ETM 2317C: Drive and Pump Systems</td>
<td>3</td>
<td>Fall</td>
</tr>
</tbody>
</table>

Term 2

<table>
<thead>
<tr>
<th>Course: Course Title</th>
<th>Credit Hours</th>
<th>Terms Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETS 1511C: Motors and Controls</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>ETS 1700C: Hydraulics and Pneumatics</td>
<td>3</td>
<td>Spring</td>
</tr>
</tbody>
</table>

Total Program Credit Hours
The Pneumatics, Hydraulics and Motors for Manufacturing T.C. program requires a minimum of 12 credit hours. Total program hours may vary based on the student's individual degree plan. Please see an advisor for individual guidance. This program is not eligible for financial aid.

Program Learning Outcomes
Upon completing this program, students will be able to demonstrate proficiency in the following program learning outcomes:

- Students will learn the mechanics, hydraulics, pneumatics, and controls
- Students will get information about devices
- Students will learn drive and pump systems

Task
- Explore career resources at fscj.edu/student-services/career-development.
- Meet with your advisor each term.
- Satisfy the technical certificate graduation requirements.