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### Undergraduate Research Program

<b>Project Name</b>	Modular Reconfigurable Robotics using Additive Manufacturing
<b>Campus &amp; Location in Mexico</b>	Guadalajara
<b>Faculty</b>	Mechanical
<b>Research Area</b>	Robotical
<b>Research Responsible</b>	Armando Roman Flores
<b>Description of the Project</b>	Reconfigurable robots are constructed of robotic modules that can be connected in many ways to form a large variety of structures. Each part has a relationship with the other and allows the robot to adapt its shape to tackle various tasks. Building reconfigurable robots requires to form morphologies based on design considerations, including geometric modelling, compliant joints and mechanisms and actuators. This project intends to explore developing parts using flexible mechanisms and parts that can be printed using 3d printing techniques.
<b>Training Provided</b>	Training provided by professor in theoretical aspects, and by postgraduate students in lab equipment.

#### Offered during:

SUMMER

WINTER

SEMESTER

### Student

<b>Tasks/Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Geometrical design of the samples for mechanical testing</li> <li>2. 3D printing of samples for mechanical testing</li> <li>3. Mechanical testing of samples</li> </ol>
<b>Required Language Proficiency</b>	English level minimum B2.
<b>Required Skills and Abilities</b>	<ol style="list-style-type: none"> <li>1. Responsible</li> <li>2. Basic knowledge in mechanics of materials</li> <li>3. Basic knowledge on 3D printing technologies</li> <li>4. Basic knowledge on Matlab</li> <li>5. Basic knowledge on Finite Element</li> </ol>
<b>Other Documents</b>	<ol style="list-style-type: none"> <li>2) Accumulative grade point average (GPA) 2.5</li> <li>3) Official Transcript</li> <li>4) 2 letters of recommendation of faculty members</li> <li>5) Resume</li> <li>6) Letter of intencion explaining the reason why you would like to participate in the research program</li> </ol>