



EASTERN MICHIGAN UNIVERSITY ORTHOTICS & PROSTHETICS

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BIOMECHANICS STUDENTS BUILD “ROBOT” MODELS

As the semester draws to a close, first year students have been working tirelessly to complete their semester-long biomechanics project. With the class split into four groups, students were tasked with the challenge of assembling a ‘robot’ from prosthetic components. By applying principles that have been learned in class, students have to make their robots go from a standing position to seated, and then back to standing again with a small initiating force.

Frank Fedel, the biomechanics professor, said the robot project has several goals and objectives, all of which lead toward preparing stu-

dents for their clinical classes (and beyond). “The goals are ostensibly to en-



hance student skill, communication, problem solving, and fabrication”, said Fedel.

The students focused on balancing the internal and external the forces acting on each joint in order to produce the correct motion. Some groups used pulleys to set the robots in motion, while others incorporated small motors.

Sydney Ezell, a first year student, said that the project has helped her to understand and apply many of the concepts from the class, “The biggest challenge is trying to convey the vision in our heads and actually incorporating it to the robot.”

EMU HOSTS DIGITAL DIVAS

The Digital Divas program brought over 300 middle school girls to Eastern Michigan University for a day of programs aimed at introducing girls to STEM fields. Departments across campus put together hands-on events that allowed the students to explore careers

they may not typically get exposed to.

The MSOP program hosted three events including 3D scanning and printing, creating alginate molds, and building transibial prostheses. MSOP students and staff were on hand as more than 40 students learned what it takes to be an orthotist-prosthetist. The girls each got to take home a magnet molded from their finger and a 3D printed socket.

Other courses included fashion design, computer technology, and forensics. The program will return in the spring with over 550 high schoolers enrolled.



GRADUATE RESEARCH CONFERENCE

On November 20, the Graduate school hosted the annual Graduate Research Conference (GRC) in the student center. The GRC invites graduate students of all disciplines and colleges to participate in the conference which highlights graduate student research in a professional conference format.

This year the O&P program had an impressive showing at the conference. The poster presentations included work from 5 second year students, and 7 first year students. Students explored various topics including material science,

clinical exercise testing, and treatment options for phantom pain.



Jonathan Peurach, a second year student, had the opportunity to give an oral presentation detailing his research on postural effects of ISOs.

EMU has 19 students presenting 12 posters at the upcoming 2016 Academy Meeting.