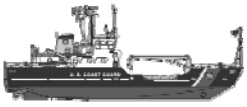

Academy Robotics on the Water

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On Saturday, November 19, 2011, students in the ENES101 Introduction to Engineering Science course will be competing in UMBC's first AROW competition. AROW, which stands for Academy Robotics on the Water, is an introductory engineering design experience developed by Captain Jonathan Russell, Lt. Cmdr. Brian Maggi and Stephen Grenier at the US Coast Guard Academy. Students are tasked with the design, implementation, test and operation of a robotic vessel to perform simulated tasks representing activities of the U.S. Coast Guard.

The student designs are based on a 16 inch x 16 inch square of two-inch Styrofoam insulation. Students are supplied with the radio controller, on-board interface unit, three motors, one servo, and two propellers. Working in teams of three to five, the students must design the propulsion, mechanisms and programming necessary to accomplish simulated Coast Guard tasks, such as tending a light house, placing navigation buoys, cleaning and recycling an oil spill – represented by ping-pong balls – and rescuing Lego fishermen who have fallen overboard. Each team is given a budget and permitted to "purchase" structural elements for their design from a common supply. The competition will be judged on the basis of cost-effectiveness of the various team designs.

The inaugural UMBC AROW competition will be held in the Atrium on the second floor of the Engineering building on Saturday. Each team will have four minutes to accomplish as many tasks as possible. There will be two competition sessions: 9:30 AM until Noon and 1:30 PM until 4PM. Approximately 40 teams of ENES101 students will compete. The UMBC community is invited to view the competition from the third floor balcony of the Engineering building.

The inaugural UMBC AROW project and competition are being supervised by the ENES101 instructors, Dr. Anne Spence, Professor of the Practice of Mechanical Engineering and Dr. Chuck LaBerge, Professor of the Practice of Electrical and Computer Engineering. They are assisted by the ENES101 Teaching Fellows, Jennifer Guy, Mathew Kurtz, Elliot Mooney, Josh Palmer, and J.T. Wojtowicz.