

Equipment Upgrade at the University of Massachusetts Lowell Research Reactor

PI: Thomas Regan, University of Massachusetts
Lowell

Collaborators: N/A

Program: Reactor Upgrades

ABSTRACT:

The University of Massachusetts Lowell Research Reactor (UMLRR) supports four growing Nuclear Science and Engineering (NS&E) programs that currently serve more than 100 undergraduate and graduate students. UMLRR recently submitted an application to the NRC for renewal of its operating license. This infrastructure grant seeks funding for equipment that will ensure the safe and efficient operation of the facility during the next 20 or more years of operations, as well as help meet the requirements of NUREG1537.

Leveraging the investments of both USDOE and internal funding, upgrades to the UMLRR facilities have enabled advances in distance education initiatives, as well as research in support of the four NS&E programs. Students and researchers from these programs have actively utilized the UMLRR facilities for a wide range of fundamental research as well as research in applied radiation science. The proposed heat exchanger and nuclear instrumentation will continue to enhance this ongoing educational development pathway. The fully instrumented heat exchanger will provide an industrial scale heating/cooling system for students to model and monitor; while the nuclear instrumentation will provide operators with more concise and complete analytics during startup and low power operation, while enabling the overall reactor safety system to meet the requirements of NUREG 1537.