

<http://npre.illinois.edu/news/ragheb-wins-colleges-everitt-award>

Ragheb Wins College's Everitt Award

May 28th, 2013

Associate Prof. Magdi Ragheb has been recognized with the College of Engineering Everitt Award for Teaching Excellence.

The Award honors a faculty member for outstanding undergraduate teaching: "A teacher who stands out and is remembered with respect, affection and admiration long after the student leaves campus."



Interim Dean Michael B. Bragg presents the College of Engineering at Illinois Everitt Award to NPRE Prof. Magdi Ragheb.

A member of NPRE's faculty since 1979, Ragheb has built the general nuclear engineering course for non-major undergraduates, NPRE 402, Nuclear Power Engineering from an enrollment of about 50 students to between 100 and 150 students, depending on the semester. This course delves into the major technical issues associated with nuclear power and the application of nuclear processes, areas which have gained considerable attention in recent years.

Even before the current emphasis on energy, Ragheb had built a strong interest in this area. The high interest and high enrollments are due to word-of-mouth praise for the course since it is outside the normal

course elective structure for most students. Ragheb has poured considerable effort into building the course content, which is available on the internet in what is a more substantial set of materials than could ever be found in a standard text. Interest in this “online text” has been expressed from collaborators and counterparts at other universities and national labs.

In addition to the excellent course content, Ragheb presents the material in an interesting and engaging way; a real challenge for classes of 150. He makes on-the-fly homework assignments so that students are always focusing on the concepts in class: typically one homework assignment per class meeting period – also an encouragement for students to attend class.

In his continuing dedication to undergraduate teaching, Ragheb has also been very active in developing new courses and course materials. He recently developed NPRE 475, Wind Power Systems, again with an on-line text. The on-line text was necessary since there is still no available text for this area that covers the topic area in the technical depth expected by advanced engineering undergraduate students. In fact, the on-line text has become very popular off campus and at least two chapters are now part of a published compendium text on Wind Power. Still, there are constant requests from other universities to use the on-line material as the major “text book” source for their courses.

As with NPRE 402, Ragheb has now built a large and growing enrollment in this course. The wind power course is remarkable in another sense: it has high student involvement in the hands-on construction of small scale wind turbine systems. The students in the course are required to form groups to build wind power systems to demonstrate the engineering and design principles that they learn in class. These systems are demonstrated on the Engineering Quad near the end of the Spring Semester. This further attests to the learning process required of the students since their systems must be operational and open for public view and demonstration.

In addition to the two previously mentioned courses, Ragheb over the years has repeated this course development style several times: NPRE 457, Safety Analysis of Nuclear Systems, NPRE 498 MC, Monte Carlo Analysis and NPRE 498 F, Fuzzy Logic, each with a virtual textbook he has developed.

Ragheb’s newest effort in this line is the co-development of a course on Energy Storage, taught this past Spring semester for the first time as a “Special Topics” course as the pathway to making an upper division technical course. This is again an area where no previous course existed, and a situation where Ragheb is developing another in-depth virtual textbook. He has done this despite a heavy teaching load, as a testament to his commitment to excellence in teaching, including moving forward into new, critically important areas where scant course materials exist. He takes on these challenges with an uncommon flare and determination, and the results are always well beyond a “typical” teaching experience, even for Illinois.

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