

## Assessment and Evaluation of the Benefits and Success of a Nuclear Engineering Educational Seminar Series

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### 1. INTRODUCTION

The Department of Nuclear Engineering at North Carolina State University has had a weekly educational seminar series on a semester basis for more than 15 years. This educational seminar series has been open for the department students, faculty, staff, and affiliates to attend and participate. Each week, a new presenter from the various nuclear engineering venues (including national laboratories, research institutes, industry, national and international agencies, and academia) introduces students to new perspectives and/or results of the innovative research being done in relation to the nuclear engineering field.

This educational 1-credit seminar course was added to the curriculum in 2007 due to the poorly attended non-credit seminars preceding before that. The seminar course, NE-601/801, was developed as a required 1-hour satisfactory/unsatisfactory grade course for graduate students in which the NE-601 section was reserved for master students while the NE-801 section was reserved for doctoral students. The on-campus master students must register until their graduation while the doctoral students must register until the passing of their preliminary exam, after which the course becomes an elective one.

The seminar is defined as an academic instruction accompanied by a visual presentation given by a person who is considered an expert in a particular field of study. It is an opportunity for students to exchange ideas and have an open dialogue with the speaker to ensure ways to use the information in a practical manner. Such an important course requires an assessment and evaluation to guarantee that its messages are being delivered to the students, while also increasing the benefits and enhancing the outcomes through the students' graduate education and, henceforth, professional career. This pilot study acts as a quality assurance step of the educational seminar series role and impact and was done by addressing several assessment questions to the participants through a survey questionnaire.

### 2. DESCRIPTION OF THE SEMINAR SURVEY QUESTIONNAIRE

The survey was designed to enclose all the required aspects that deemed important while covering the discussion, interaction, and reflection parts of the students active learning [1]. The important aspects were related to implanting the skills and knowledge that can be used by the students during their research and to advance their professional career. Table 1 lists the questions asked to the graduate students who participated in the survey which opens after each seminar presentation. In total, 26 questions were covered of which 5 questions are yes/no general questions used to sample the participating students.

The remaining 21 questions are divided over three categories: Seminar assessment, learning experience, and networking experience. Each category had seven 1-10 linear scale questions that are representative of