Nondestructive Testing for Graduate Students at Dresden International University and Iowa State University

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Education in Nondestructive Evaluation is managed in different countries and different industrial sectors in various ways. The options vary from special courses for technicians with theoretical and practical knowledge, special courses focused on requirements in dedicated fields as aerospace and learning theoretical and practical issues from Level-3-Experts in the company during work.

These systems, the knowledge of the practical aspects of the different methods for technicians who handle day by day with these techniques is splendidly constructed with top-quality. But for engineers, scientists and academics, who work on optimizing and enlarging methods, developing new methods and who use theoretical simulation models, it is important to get a broader scientific background.

In this contribution we present a Master Course for Nondestructive Testing developed by the “Dresden International University” in close cooperation with the Technical University Dresden and the Fraunhofer IZFP. The students get an extensive background knowledge of a plurality of Nondestructive methods. The teachers come from University as well as the Fraunhofer Institute, so it is secured that both the theoretical basics and novel research and developments are included. This is assisted by practical training at the Fraunhofer Institute. The requirement for participation is a successful finished study in engineering or science. The special feature on this Master course is its character as correspondence course. The main content is taught at distance learning courses using digital scripts and video conferences, questions are answered using E-mail and phone, too. For four weeks in the year the students have to show presence on campus in Dresden for practical courses and exams. The course of studies finishes with the international accredited certificate as Master of Science for Nondestructive Testing.

This master degree can be compared the NDE Minor program that is offered at the Iowa State University. This is an additional certificate that graduate students in engineering can earn by taking a certain number of NDE related courses. In the paper we will briefly compare both Programs for NDE education for graduate students at both Universities.