

Academic Education of NDT at Master Level and Resulting Implications on the NDT Community

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Since nearly five years the fully English taught NDT Master Course is now run at Dresden International University (DIU), the advanced training subsidiary of the University of Technology of Dresden in Germany. What initially started on the basis of a collaboration with a university in China and Russia respectively has now grown to a recruitment of students from an increasing number of locations worldwide. The fact that NDT at academic level is either only taught within the scope of some other course such as mechanical engineering or structural integrity, is locally focused and not English taught, is limited to a one year research project, or is more related to a foundation course has demonstrated that there is a lack for those who may have studied a classical natural science or engineering discipline in their undergraduate and are seeking to combine this with NDT at a master level. The DIU NDT Master Course is organised in four semesters and has a strong scientific and hence research focus. In the first semester students are taught in all the major fundamental disciplines such as materials (metals, polymers, composites), measurement techniques, mechanics (vibration, sound, fatigue, fracture), numerical methods and signal processing, and introduction to NDT and & quality management. In the second semester major emphasis is on the different NDT techniques including acoustics, optics, electromagnetism, radiology and microscopy. The third semester is devoted to participating in the Basic Course (BC) of the German Society for NDT (DGZfP) and a research placement in a reputable research centres such as the affiliations of the different lecturers including BAM in Berlin, Fraunhofer, industries or different universities, all with a specific dedication to NDT. During the fourth and final semester students do perform their master thesis, most likely with the institutions they already performed their research placement with. The modules are consecutively run as a block. Location of teaching is in Dresden/ Germany during the first two semesters. During the third semester students move to Berlin/Germany for the BC module at DGZfP before then transferring to the location where they will perform their research placement most likely followed by the master thesis. The course has been growing continuously over the past five years would it be in terms of students, partner organisations or the network it generates in general. In that context it is enjoyable to see how an increasing number of partners from industry, research facilities and academia get an interest in offering research placements and master thesis opportunities with challenging research related topics, possibly even with the student being taken over in the end to enhance the organisation's research capabilities on the one hand and fill the gaps of a retiring NDT generation on the other. The paper to be presented will highlight some of the activities within the course providing specifically examples on what the students performed research on and where they may have further pursued their career within an NDT environment.