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Institution: Virginia Tech
TPG Name: 5T03 OH008613-09 Safety and Ergonomics Training
Performance Period: July 1, 2014 – June 30, 2015

SECTION I

TPG Summary:

The TPG at Virginia Tech, housed in the Department of Industrial and Systems Engineering, emphasizes three aspects of occupational safety and health (OSH) at the MS (thesis) and PhD levels: safety engineering, occupational ergonomics, and construction OSH. The former two aspects have been a concentration of the program for several years, while the latter emphasis was added to benefit from the growing collaboration between several academic and research units at Virginia Tech: Department of Industrial & Systems Engineering (ISE), the Myers-Lawson School of Construction, Department of Civil & Environmental Engineering, and the Center for Innovation in Construction Safety and Health.

Our aims are to provide a high quality education to trainees, to have them conduct high quality basic and/or applied research, and to provide service to our profession, to industry, and to society. A key goal of our program is support the NIOSH goal of supplying qualified professionals who move on to careers that focus on occupational safety health, through both research and practice. The need for training in these areas is justified in several ways, though primarily by the continuing levels of occupational accidents, injuries and illnesses, substantial pre-doctoral interest, educational needs in contemporary OSH positions, and the national need for trained researchers and practitioners in these areas. Our program is characterized by a dual emphasis on breadth of trainee experience and the requirement for specialization, the latter emphasized by the need for a formal research project related to OSH.

A cohesive group of faculty support the program, with expertise from diverse areas of OSH. Training is achieved through a combination of formal coursework, faculty advising, research, and more general exposure through seminars and interdisciplinary interactions. Candidates for our program are MS or PhD students accepted within the Human Factors Engineering and Ergonomics graduate concentration area within the Industrial and Systems Engineering Department. Prospective trainees are also actively recruited through several means. Our program has been quite successful, based on the number of graduates, the high proportion of graduates continuing in the OSH field, faculty and student scholarly output, awards, and the continuing high number of applications received.

Relevance:

Our training focuses on safety engineering, occupational ergonomics, and construction OSH, and supports national and regional needs for trained practitioners and researchers in these areas. Our program is characterized by a dual emphasis on breadth of trainee experience and the requirement for specialization, the latter emphasized by the need for a formal research project related to OSH.

SECTION II

Program highlights of high impact:

One trainee (PhD) completed the program at Virginia Tech and began working in industry. Program faculty and current/prior trainees were productive in terms of disseminating research results in the areas of occupational safety and health (e.g., journal papers, and conference papers/presentations). A press release was distributed (07/13/14) by the AIHA, highlighting a paper published in the *Journal of Occupational and Environmental Hygiene* by a former

supported Trainee in the program (<https://www.aiha.org/about-aiha/Press/2014PressRelease/Pages/JOEH--Obesity-Linked-to-Low-Endurance,-Increased-Fatigue-in-the-Workplace.aspx>).