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Teaching an Undergraduate Course on Computational Fluid Dynamics REZA H. SHEIKHI, Northeastern University — A new computational fluid dynamics (CFD) course is introduced to Mechanical Engineering undergraduate curriculum at Northeastern University. The main objective is to enable students to make use of CFD in their cooperative-education work, senior capstone project as well as future engineering career. CFD has become an indispensable tool for engineering design & analysis, and it is now available to broad range of users, through commercial software packages. Proper use of these softwares, however, requires basic knowledge of CFD to understand their capabilities and limitations, to be aware of the pitfalls and to interpret the predictions. The course is designed to offer a balanced coverage of essential and applied CFD, with particular emphasis on verification & validation and CFD analysis. Training for a commercial CFD package is an integral part of the course which is facilitated by the use of project-based learning. In this presentation, details of development and implementation of this course will be discussed.

Reza H. Sheikhi Northeastern University

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