

TSS17-2017-000020

C

Abstract for an Invited Paper
for the TSS17 Meeting of
the American Physical Society

Computation as Part of a Balanced Undergraduate Physics Curriculum¹

MARIE LOPEZ DEL PUERTO, University of St. Thomas

A balanced undergraduate physics curriculum requires that students progressively work on computation, experiment, and communication skills throughout the program. The University of St. Thomas Physics Department has been working toward integrating computation by embedding it in different ways in different courses, starting with an introduction to computational physics in our sophomore-level “Applications of Modern Physics” course and laboratory, building on skills through short computational projects in many of our lecture-based courses, and developing a “Methods of Computational Physics” course. In this talk I will outline the structure of our program and where it is headed. I will then go into some detail on the homework problems and laboratories that have been developed as part of the “Applications of Modern Physics” project, discuss our experience implementing them, and give interested faculty information on how to obtain these materials.

¹This project has been funded in part by NSF grant DUE-1140034.