

Conducting Computational Physics Laboratory Course Using Cloud Storage Space

Authors : Ajay Wadhwa

Abstract : A Laboratory course on computational physics is different from the conventional lab course on other topics of physics like Mechanics, Heat, Optics, etc. because it involves active participation of the teacher as well as one-to-one interaction between teacher and the student. The course content requires the teacher to teach programming language as well as numerical methods along with their applications in physics. The task becomes more daunting when about 90% of the students in the class have no previous experience of any programming language. In the presented work, we have described a methodology for conducting the computational physics course by using the Google Drive and Dropitto.me cloud storage services. We have evaluated the performance in a class of sixty students by dividing them equally into four groups. One of the groups was made the peer group on whom the presented methodology was tested. The other groups were taught by using conventional method of classroom lectures. In order to assess our methodology, we analyzed the performance of students in four class tests. A study of certain statistical parameters like the mean, standard deviation, and Z-test hypothesis revealed that the cyber methodology based on cloud storage is more efficient than the conventional method of teaching.

Keywords : computational Physics, Z-test hypothesis, cloud storage, Google drive

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020