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## **The online preparatory course on basic mechanics for first year life-science students without HS background in physics.**

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Under current admission conditions for the Faculty of Science at the University of Ottawa, students entering our faculty need to have equivalents of two advanced math courses (Advanced Functions, and Calculus and Vectors), as well as two of the three 4U science courses (Chemistry, Biology and Physics). At present time, roughly 30% of all admitted students are missing one of them, and it is invariably a physics course. Altogether, they make up more than half (nearly 350 in fall of 2015) of the students taking introductory life-science physics course (PHY1321).

To address this issue within the program's current credit constraints, we created a course known as PHY1331, in which students are offered an extra 80 minutes lecture time every week to be spent on basic mechanics concepts.

Over the last ten years, this approach has been used with some success, when measured by the grade gaps between two groups of students at the start of the semester and at the end. In the fall of 2015, the online component of the course has been offered to students as a way to foster their familiarity with fundamental concepts of mechanics.

It was offered as an option rewarded with extra credit against the final exam.

By scoring the maximum points, students would be able to lower their final exam weight by 25%. Roughly 50 students participated in this exercise.

In the presentation, the participants' results on three identical tests will be compared with the results of non-participants, as well as with the scores of the students from PHY1321. The correlations and effectiveness of the proposed approach will be discussed, together with the specifics of the online course component's structure. The conclusions and the resulting modifications for the future mandatory, blended course of this type will also be presented.

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**Session Classification:** W3-2 Teaching Physics to a Wider Audience (DPE) / Enseigner la physique à un auditoire plus vaste (DEP)

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