WORKSHOP PROPOSAL: Teaching/learning physics in bio-areas and related degrees

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Abstract. Teaching & learning physics in bio areas require a revision of contents, approaches and methods. The proposed workshop addresses the presentation for discussion of several experiences, covering different degrees (Agro-food, Health Biology, Biotechnology and Chemistry), carried out along the last few years by the Research Unit in Physics Education (Department of Mathematics, Informatics and Physics - University of Udine), and Department of Physics at U. de Alcalá de Henares and Science Faculty at U. Autónoma of Madrid-Spain).

1 Introduction

The workshop will be based on the presentation of three research experiences developed along the last years, in different degrees:

i.- Research-based innovation in introductory physics course for biotechnology students
ii.- Promoting active learning in physics courses for the agro-food degrees
iii.- Physics for non-physicists: two model cases: Life Sciences and Chemistry
The three contributions will be presented focusing on the aspects included in the attached abstracts.

The panel will be open for discussion of the results of these experiences, covering several aspects such as (a) curricular design, including contents, instruments and methods; (b) learning modalities and strategies in teaching specific topics; (c) role of the laboratorial activity; (d) link between academic teaching and advanced research in the respective fields (e) role of exercises