

# Development and utilization of video clips as didactic resources for an experimental subject

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## ABSTRACT

In this paper we present the actions developed in a teaching innovation Project from Universidad de Salamanca (USAL) during the academic year 2013/14. The main goal is the development of a tool to help 2<sup>nd</sup> year students of the Thermodynamics Laboratory course in the Physics Degree to perform lab experiments in a more autonomous way. Students guided by teachers have prepared video clips in the format "USALMedia" corresponding to five lab experiments. Such material is incorporated into the platform Studium (Moodle) of our university, going further in a previous work about the integration of the activities of the laboratory in such platform. This material is also available free of charge in the iTunes-U platform associated to Universidad de Salamanca. The videos can be viewed or downloaded from the website and played on a PC, Mac, PDA, smartphone or tablet.

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## Categories and Subject Descriptors

K.3 Computers and education

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Experimentation.

## Keywords

Educational video, Laboratory, Thermodynamics, iTunes U, Moodle.

## 1. INTRODUCTION

*Thermodynamics Lab* is a one semester subject in the second level of the Physics Degree at Universidad de Salamanca. It is a mandatory subject in the Physics Degree and belongs to the module *Thermodynamics and Statistical Physics*, that have four subjects. Essentially it is an experimental subject. The didactic methodology we follow can be divided in four steps, that we summarize in the following paragraphs:

- At the beginning some theoretical lectures are given. The teacher explains the basic tools related both with the theoretical basis of each of the experiences that the students will find later in the lab, as well as the methodology to prepare the report they must prepare at the end of each experience.