E-Learning and Joomla

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Lecture Proposal for the TI-Nspire & Derive Strand

ABSTRACT

We present a work developed by a group of teachers in the Department of Applied Mathematics at the University of Malaga. Since 2002, FERMAT[1] Project has become an important meeting point between teachers and students for the subjects of Numerical Analysis, Algebra, Calculus, Vectorial Analysis, Differential Equations and Discrete Mathematics in the Degree of Telecommunication Engineering.

Our main goal was the development of an educational environment complementary to the classical model of teaching, in order to get a gradual adaptation to the European Space for Higher Education (ESHE) according to Bologna Declaration. Our method consists on theoretical lessons using multimedia technologies and also computer lab lectures using different CAS (among others: Derive, TI-Nspire, Matlab, Mathematica and Scilab). FERMAT also provides different resources to students such as lecture notes for classroom and for lab, proposed and solved problems and exams, computer tasks, questionnaires, videos, and also on-line resources such as: mail, forum, chat, videoconference, …

In a first step we developed FERMAT as a website where we included some of these resources useful for students. The suggestions made from students and teachers led us to the development of a new framework: FNOVA[2]. Thanks to these suggestions we have introduced important improvements in this version of our tool.

In this lecture, we will describe this framework as a model for the new Bologna syllabus.

Keywords

Mathematics, E-learning, Moodle, Joomla, ESHE, HECACEJ, CAS, Bologna Syllabus

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[1] FERMAT: Forum about Experiences and Resources of Mathematic Applied to Technologies. FERMAT web (http://www.fermat.uma.es) has been recognized as the second winner of the award for the III International University Competition in Research and Teaching in the web: http://www.campusred.net/certamen.

[2] FNOVA: FERMAT NOVA, arises of integration between our website and Joomla.