

Coimbra Group Seminar

Innovation in Learning and Teaching in Science, Technology, Engineering and Mathematics (STEM) fields

Granada, 14 November 2019

Salón de Grados, School of Architecture, Campo del Príncipe, Granada

Objectives

- To share good practices in institutional management and support services for innovation in learning and teaching
- To share useful and sustainable teaching and training experience implemented at Coimbra Group universities
- To promote the development of innovative ideas and good practices in learning and teaching in the field of STEM
- To establish new approaches and action lines for teaching and learning in Higher Education the new European scenarios of Erasmus, Horizon Europe and the Agenda 2030

Participants

The seminar is open to the entire academic communities (students and staff) of all Coimbra Group Universities. It will be particularly useful for:

- Institutional coordinators and support officers for services related to innovation in learning and teaching and
- Teachers who are looking for or would like to share innovation in teaching and learning in STEM fields.

Programme

Thursday, 14 October 2019	
09:00	Registration
09:15	Opening and welcome Inmaculada Ramos Tapia <i>Director General of Universities. Regional Government of Andalusia</i> Dorothy Kelly <i>Vice-Rector for Internationalization. University of Granada</i> M^a Teresa Pozo Llorente <i>Director for Quality, Teaching Innovation and Planning. University of Granada</i> José María Manzano Jurado <i>Director of the School of Architecture. University of Granada</i> Giulia Licini <i>Chair of the STEM Working Group of the Coimbra Group of Universities. University of Padua</i>
10:15	Keynote lectures: Innovation in Learning and Teaching. Challenges and developments

	<p>Women in STEM: Why so few in Higher Education? Nuria Rico Castro, Department of Statistics and Operational Research, <i>University of Granada</i></p> <p>Innovative Teaching Approaches to attract, engage, and maintain women in STEM: W-STEM project Francisco José García-Peñalvo, <i>Department of Computer Science and Automation, University of Salamanca</i></p>
11:15	Coffee Break with poster exhibition
11:45	<p>Round Table: Institutions of Higher Education as generators of innovation and good practices in learning and teaching: Organization of services for their development and support</p> <p>Jorge Expósito López <i>Director for Training, Innovation, and Teaching Staff Assessment. University of Granada</i></p> <p>Giulia Licini <i>Department of Chemical Sciences. University of Padua</i></p> <p>Francisco José García-Peñalvo <i>Department of Computer Science and Automation. University of Salamanca</i></p> <p>Krisztina Lénárt <i>Head of the Education Development and Talent Support Department, Eötvös Loránd University, Budapest</i></p> <p>Dorota Malec <i>Vice-Rector for University Development. Jagiellonian University. Cracow</i></p> <p>Jean-François Rees <i>President of the School of Biology, Université catholique de Louvain</i></p>
13:00	Lunch
14:00	<p>Guided tour to the School of Architecture Ricardo Hernández Soriano <i>Director for Built Heritage. University of Granada</i></p>
15:15	<p>Showcasing experiences in innovation and good practices in learning and teaching in STEM fields</p> <p>Short communications (10 min)</p> <p>[1] Combining Select-and-Fill-In Concept Maps and Peer Instruction in a New Evaluation Tool for Large Groups of Learners Manuela Guisset, Guillaume Lobet and <u>Jean-François Rees</u> Faculty of Sciences / Bioengineering & Louvain Learning Lab, <i>Université catholique de Louvain, Belgium</i></p> <p>[2] Students in the Process of Exam Quizzes Building Jacek Urbaniec Head of the eLearning Centre, <i>Jagiellonian University, Cracow</i></p> <p>[3] Teaching4Learning: Promoting Innovative Teaching in Italian Higher Education. The case of University of Padua. Concetta Tino Department of Philosophy, Sociology, Pedagogy and Applied Psychology (FISPPA), <i>University of Padua</i></p> <p>[4] Active learning and teaching methods in Science lectures Vidita Urbonienė Institute of Chemical Physics. <i>Vilnius University</i></p>

	<p>[5] Wandering micro:bits in the public education of Hungary Andor Abonyi-Tóth Faculty of Informatics, Eötvös Loránd University, Budapest</p> <p>Flash Presentations (5 min)</p> <p>[1] SPOCs: An Outstanding E-Learning Tool Alicia Domínguez-Martín Department of Inorganic Chemistry. University of Granada</p> <p>[2] Design and elaboration of didactic resources for teaching and learning of Mathematics in Primary Education Esperanza López Centella Department of Didactics of Mathematics. University of Granada</p> <p>[3] An interdisciplinary participatory research as a teaching-learning strategy in the Bachelor of Medicine. Cohort study of lung development in students of Medicine Pedro Romero Palacios Department of Medicine. University of Granada</p> <p>[4] Using QR codes as didactic resource in Analytic Chemistry Miguel Erenas Rodríguez Department of Analytical Chemistry. University of Granada</p> <p>[5] Accessing to statistics learning without limitations: A virtual self-learning environment for statistics Ana María Lara Porras Department of Statistics and Operational Research. University of Granada</p> <p>[6] The "Horizontal Metaphor" methodology as a tool for captivating architects into structural analysis Fernando Gómez Martínez Department of Structural Mechanics and Hydraulic Engineering. University of Granada</p> <p>[7] Teaching transmission line innovation: An experience in the field of Electrical Engineering Jesús Francisco Fornieles Callejón Department of Electromagnetism and Physics of Matter. University of Granada</p> <p>[8] An online repository for hands-on experiments for Experimental Physics classes Artur Schmitt Department of Applied Physics. University of Granada</p> <p>[9] Student-guided visits to the School of Architecture of the University of Granada: A new tool for active learning Delfi Bastos González Department of Applied Physics. University of Granada</p> <p>Questions and feedback</p>
17:00	<p>Poster exhibition (with coffee) The authors will be able for questions and further information.</p> <p>[1] Web-based writing system "Multilingual Scientific Essay" Rosario Arroyo González Department of Didactics and School Organization. University of Granada</p> <p>[2] An interactive laboratory for a competence development in Analytical</p>

Chemistry

Isabel María Pérez de Vargas Sansalvador
Department of Analytical Chemistry. University of Granada

[3] Fruit flies and inheritance: A case of project-based learning

Rafael Navajas Pérez
Department of Genetics. University of Granada

[4] Innovation in teaching Applied Mathematics at the University of Granada

Pedro González Rodelas
Department of Applied Mathematics. University of Granada

[5] Project-based learning for promotion of teamwork and communication techniques

María Clavero Gilabert
Department of Structural Mechanics and Hydraulic Engineering. University of Granada

[6] The historical collection of the Department of Zoology as teaching resource

Francisca del Carmen Ruano Díaz
Department of Zoology. University of Granada

[7] The virtual museum of Zoology and its evolution

Francisca del Carmen Ruano Díaz
Department of Zoology. University of Granada

[8] Preliminary results of the project "Orientation and capacitation of Chemical Engineering students to facilitate their job insertion"

María Ángeles Martín Lara
Department of Chemical Engineering. University of Granada

[9] Using gamification and cases-based learning through the Classcraft tool to improve collaborative work in neurological physical therapy class

Irene Cabrera Martos
Department of Physiotherapy. University of Granada

[10] Use of plastinated organs as a support tool for your microscopic study

Cristina Elena Trenzado Romero
Department of Cell Biology. University of Granada

[11] Gamification and game-based learning for the development of STEAM skills in kindergarten, primary and secondary education. Updating initial teacher training

Alicia Fernández Oliveras
Department of Didactics of Experimental Sciences. University of Granada

[12] Teaching innovation in designing resources to evaluate competencies with PBL in the Nursing Degree

Carmen Enrique Mirón
Department of Inorganic Chemistry. University of Granada

[13] Application of the Flipped Classroom methodology in Higher Education: analysis of perceptions of future teachers

Inmaculada Aznar Díaz
Department of Didactics and School Organization. University of Granada

[14] Training in the early detection of gender violence through simulated clinical experience

Nicolás Mendoza Ladrón de Guevara
Department of Obstetrics and Gynaecology. University of Granada

	<p>[15] Incorporation of the perspective of gender, equity and Human Rights in teaching and learning of sexual and reproductive health Nicolás Mendoza Ladrón de Guevara Department of Obstetrics and Gynaecology. University of Granada</p> <p>[16] Implementing an open source geographic information system in territorial planning workshops Francisco Emilio Molero Melgarejo Department of Urban and Spatial Planning. University of Granada</p> <p>[17] Virtual support assessment for the competencies of the final year project Maria Adelaida Álvarez Serrano Department of Nursing. University of Granada</p> <p>[18] Developing resources for teaching to students with Special Educational Needs (SEN) in Anatomy Laura Cabeza Montilla Department of Human Anatomy and Embryology. University of Granada</p> <p>[19] Application to generate exercises of Econometrics Rosa María García Fernández Department of Quantitative Methods for Economics and Business. University of Granada</p> <p>[20] Acquisition of new skills in cardiorespiratory physiotherapy: closer to reality Irene Torres Sánchez Department of Didactics and School Organization. University of Granada</p> <p>[21] Use of new technologies applied in the teaching of Anatomy area subjects Gloria Perazzoli Biomedical Research Centre (CIBM). University of Granada</p> <p>[22] Design and implementation of a network videogame as a platform for project-based learning: MATILDA (ModulAr Telematic topics related Development platform) Juan José Ramos Muñoz Department of Signal Theory, Telematics and Communications. University of Granada</p> <p>[23] Simulating interest in learning Biochemistry using blogUGR to successfully integrate students and teacher with society and current affairs María Isabel Rodríguez Lara Department of Biochemistry and Molecular Biology III and Immunology. University of Granada</p> <p>[24] Tutoring and academic/professional orientation for students of the Physics Degree at the University of Granada Estrella Florido Navio Department of Theoretical Physics and Cosmology. University of Granada</p> <p>[25] Teaching4Learning@Unipd. The case of University of Padova Concetta Tino Department of Philosophy, Sociology, Pedagogy and Applied Psychology (FISPPA). University of Padua</p>
17:30	<p>Workshops: Looking for the future Dynamic working groups will be set up in order to discuss and design proposals for the future of teacher training and innovation in teaching and learning in</p>

	Higher Education. Possible topics are (according to the interests of the participants): Group 1: Teacher training, new methodologies and resources Group 2: Sustainable development (Agenda 2030) in teaching and learning Group 3: other topics
18:30	Reporting from the workshops A speaker of each working group will present the conclusions and proposals for future projects and activities
19:00	Wrapping-up and conclusions
	Farewell and closure

For further information, please contact:

Prof. Dr. Artur Schmitt
Department of Applied Physics
University of Granada
Email: schmitt@ugr.es
Tel.: (+34)958-246104
Mobile: (+34)637-012616