



COMPETENCES IN MATHS EDUCATION

Title of the course	Diversity in Mathematics Education
ECTS	2,5
Description	Diversity must be considered both as a chance and as one of the main challenges in the field of mathematics education for the 21st challenge and this has to be done within a context of good inclusivity practices in the mathematics classrooms.
Learning outcomes	<p>The students will be able to:</p> <ul style="list-style-type: none"> • Identify diversity factors present in a maths classroom that require special treatment. • Establish relationships between affective, social and cognitive domains in the context of an inclusive mathematics education. • Describe the main features of inclusive and interdisciplinary learning environments for the mathematics classroom. • Select, analyze and evaluate teaching and learning maths resources with respect to their potential use to deal with diversity in the classroom. • Design simple maths tasks and activities based on cooperative learning to address diversity enhancing mutual enrichment. • Judge and recognize the main features of good innovative experiences in the framework of diversity and mathematics education.
Contents	<ol style="list-style-type: none"> 1. Diversity as a chance and a challenge for mathematics education. 2. Didactical resources and tools for dealing with diversity within the maths classroom. 3. Mathematical games and puzzles for inclusive mathematics education. 4. The history of mathematics as a key for integration. 5. Solving mathematics problems as an activity for everyone. 6. The cooperative learning in mathematics in the context of diversity. 7. Beliefs and attitudes: hidden variables in maths education. 8. Gender and mathematics. 9. New perspectives and challenges in maths educational research and innovation through the eyes of diversity
Methodology	Active and personalized learning will be at the core of the methodological proposal for this course by means of a suitable combination of student-centred teaching methods and techniques such as PBL, dialogic learning and case study.
Evaluation	Lesson plan integrating all the eight key competences. Written in English, a maximum of 5000 words. Public exposition and debate.



Bibliography

- Bishop, A., Tan, H., & Barkatsas, T. N. (Eds.). (2014). *Diversity in Mathematics Education: Towards Inclusive Practices*. Berlin: Springer.
- Robbins, B. (2000). *Inclusive Mathematics 5-11*. London: Bloomsbury Publishing.
- Boon, R., & Spencer, V. (2010). *Best practices for the inclusive classroom: Scientifically based strategies for success*. Naperville, IL: Sourcebooks, Inc.
- Fennema, E., & Leder, G. C. (1990). *Mathematics and gender*. Williston, VT: Teachers College Press.
- Gargiulo, R. M., & Metcalf, D. (2017). *Teaching in today's inclusive classrooms: A universal design for learning approach*. Belmont, CA: Nelson Education.
- Grootenboer, P., & Marshman, M. (2016). *Mathematics, Affect and Learning*. Berlin: Springer.
- Zaslavsky, C. (1996). *Multicultural Math Classroom: Bringing In the World*. Portsmouth, NH : Heinemann.