



Course Code EDUC-562	Course Title Affect and Learning	ECTS Credits 9
Department Education	Semester Spring	Prerequisites EDUC 510
Type of Course Required	Field Mathematics and Science Education	Language of Instruction Greek
Level of Course 2 nd Cycle	Year of Study 1 st	Lecturer(s) Dr George Philippou
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the course:

During the past few decades educators have become more aware that learning is influenced by multiple factors including cognitive, affective and environmental factors. The significance of the affective domain derives from the fact that a person's behaviour, including the learning or teaching behaviour, depends rather on his/her beliefs than on his/her knowledge. This course aims to help students develop an awareness of and a personal view about the various dimensions of the affective domain as well as of their interconnection with teaching and learning.

Specifically, the course aims to lead students become able to:

- Define, analyze, and compare the meaning and the significance of the basic affective variables in learning
- Describe methods and techniques for measuring variables of the affective domain
- Refer to similarities and differences of the basic affective variables and specify their impact on learning.
- Describe methods, procedures and classroom activities for enhancing students' affect as regard learning

Learning outcomes:

By the end of the course the students are expected to become able to:

- Analyze the meaning and discuss the significance of the various concepts of the affective domain in the process of teaching and learning.
- Define appropriate means and techniques for measuring affective variables and apply them in small scale research programs
- Summarize and evaluate important findings of recent research on the affective domain as related to teaching and learning.
- Propose methods and classroom activities appropriate for the enhancement of students'

affective relationship with learning and particularly with Mathematics and the Natural Sciences.

- Propose and apply methods leading to advancement of students' learning orientation and motivation to learning.
- Follow up the continuing research in this field, undertake small range research on their own and function as reference person in the school unit and the educational system.

Course content:

The course content includes reading the basic book literature and also a selection of the classical and the most recent research articles. More specifically, the following concepts will be discussed, including their interrelations and their impact in the process of academic learning:

- Emotional variables and their significance inside and outside the classroom.
- Attitudes towards learning and their consequences
- Conceptions of learning and of teaching
- Beliefs related with teaching and learning and specifically:
 - Academic self concept and self esteem
 - Efficacy beliefs as related to learning
 - Motivational beliefs
- Metacognition and self-regulated learning.

Learning activities and teaching methods:

Teacher lectures. Individual and group guidance. Presentation of journal papers and course studies by students.

Assessment methods:

Formative evaluation and continuous assessment, including: class participation, summary and presentation of research papers, development and presentation of a course paper (empirical or synthetic study), and written final examination.

Recommended Textbooks/Readings

Books/chapters in books

Bandura, A. (1997). *Self-efficacy: The exercise of control*: New York: Freeman.

Boekaerts, M., Pintrich, P.R. & Zeidner, M. (Eds) (2000). *Handbook of Self-Regulation*. San Diego: Academic Press.

Costaridou-Euclides, A. (1998). *Motivation in Education*. Athens. Helleinika Grammata.

Leder, G., Pehkonen, E., & Toerner, G. (Eds) (2002). *Beliefs: A hidden variable in mathematics education?* Dordrecht: Kluwer Academic Publishers.

Philippou G. N. & Christou, C. (2001). *Affective variables and mathematical learning*. Athens: ATRAPOS Publishers.

Volet, S. & Jarvela, S. (2001). *Motivation in learning contexts: Theoretical and methodological implications*. Pergamon Press.

Journal Articles

Boekaerts, M., & Minnaert, A. (2006). Affective and Motivational Outcomes of Working in Collaborative Groups. *Educational Psychology*, 26(2), 187-208.

Charalambous, Ch. Y., Panaoura, A. & Philippou, G. (2009). Using the history of mathematics to induce changes in preservice teachers' beliefs and attitudes: insights from evaluating a teacher education program. *Educational Studies in Mathematics*, 71, 161-180.

Charalambous, Ch., Philippou, G, N., & Kyriakides, L. (2008). Tracing the development of pre-service teachers' efficacy beliefs in teaching mathematics during fieldwork. *Educational Studies in Mathematics*, 67, 125-142.

Eshel, Y. & Kohani, R. (2003). Perceived Classroom Control, Self-Regulated learning Strategies, and Academic Achievement. *Educational Psychology*, 23(3), 249-260.

Hargreaves, A. (2000). Mixed emotions: teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16, 811-826.

Labone, E. (2004). Teacher efficacy: maturing the construct through research in alternative paradigms. *Teaching and Teacher Education* 20, 341-359.

Lodewyk, K.R. (2007). Relations among Epistemological Beliefs, Academic Achievement, and Task Performance in Secondary School Students. *Educational Psychology*, 27(3), 307-327.

Muis, K. (2004). Personal epistemology and mathematics: A critical review and synthesis of research. *Review of Educational Research*, 74(3), 317-377.

Muis, K. R., Bendicen, L. D. & Haerle, F. C. (2006). Domain-Generality and Domain-Specificity in Personal Epistemology Research: Philosophical and Empirical Reflections in the Development of a Theoretical Framework. *Educational Psychology Review*, 18, 3-54.

Panaoura, A. & Philippou G. N. (2007). The developmental change of young pupils' metacognitive ability in mathematics in relation to their cognitive abilities. *Cognitive Development*, 22, 149-164.

Patterson, N. D., & Norwood, K. S. (2004). A case study of teacher beliefs on student beliefs about multiple representations. *International Journal of Science and Mathematics Education*, 2, 5-23.

Usher, E. L., & Pajares, F. (2006). Sources of academic and self-regulatory efficacy beliefs of entering middle school students. *Contemporary Educational Psychology*, 31, 125-141.

Vollmeyer, R. and Rheinberg, F. (2006). Motivational Effects on Self-Regulated Learning with Different Tasks. *Educational Psychology Review*, 18, 239-253.

Warfield, Wood, & Lehman, (2005). Autonomy, beliefs and the learning of elementary school mathematics teachers. *Teaching & Teacher Education*, 21, 439-456.

Wilkins, J.L.M. (2008). The relationship among elementary teachers' content knowledge, attitudes, beliefs, and practices. *Journal of Mathematics Teacher Education*, 11, 139-164.