



Democritus University of Thrace, Kavala, Greece

School of Science
Department of Informatics

Department of European and International Programmes – Erasmus+

Agios Loukas, 654 04, Kavala University Campus, Greece
0030-2510-462221 & -290 & -308

Proposed Course for incoming Erasmus students¹

Responsible for the course (lecturer) (name, phone number, e- mail address)	Assist. Professor Eleni Vrochidou 0030 2510 462 320 evrochid@cs.duth.gr
Title of the Course	Computer Graphics
ECTS credits	5
Short contents of the course	<ol style="list-style-type: none"> I. Introduction - Processing systems and graphical information visualization systems. II. Vectorized and mosaic graphics. Color models. Algorithmic hierarchy of processing and visualization of graphical information. III. Basic algorithms to create a line, circle in mosaic. IV. Clipping in two and three dimensions. V. Coordinate Systems. Homogeneous coordinates. VI. Basic and composite transformations in two and three dimensions. VII. Windows and views, Window into view transformation. VIII. Observation spaces in three dimensions. Projective representations in three dimensions. IX. Geometric modeling / representation of objects in two and three dimensions. X. Adding texture to three-dimensional models. XI. Key-frame and Camera animation. Lighting.
Aim of the course and target audience	<ul style="list-style-type: none"> • The course aims to bring in contact and give the possibility to the student to deal with all those topics in a very interesting field of informatics, computer graphics. • Target audience: Undergraduate students of Informatics/ Computer Science OR Education.
Teaching Methods duration and Evaluation	<p>Lectures: 26 hours Exercises: 26 hours</p> <p>Evaluation: 80% Written exam 20% Individual group project</p>
Offered Period	Fall semester
Indicative bibliography	<ol style="list-style-type: none"> 1. T. Theoharis, G. Papaioannou, N. Platis, N. M. Patrikalakis, "Graphics and Visualization: Principles and Algorithms", SYMMETRIA Editions, 2010, ISBN: 9789602662960. (Greek Edition) 2. T. Theoharis, A. Bem, "Graphics: Principles and Algorithms" SYMMETRIA Editions, 1999. (Greek Edition) 3. P. Shirley, M. Ashikhmin, S. Marschner, "Fundamentals of Computer Graphics", A K Peters/CRC Press, 3rd Edition, 2009, ISBN: 9781568814698.

¹ Could be easily used and offered for TS movement to our Erasmus partners