Babeş–Bolyai University, Cluj–Napoca
Faculty of Mathematics and Computer Science
Academin year 2006/2007
Semester II

I. General informations on the course, seminar

Title: Geometry
Code: MMG0002
Number of credits credits: 6
Place: -
Schedule:-

II. Informations on the theachers

Name, position: Topan Liana, Lector dr
Contact information: ltopan@math.ubbcluj.ro
Ore de audienţă: -

III. Description of the course:

The purpose of the course is to introduce the main notions and methods in analytic geometry, affine geometry, projective geometry and differential geometry, in a way which is very useful, especially for the computer science students, with applications in computer graphics. Precisely, the following subjects will be touched: vector algebra, plane and space analytic geometry, plane and space transformations, conics and cuadrics, fundaments of projective geometry, basics on differential geometry of curves and surfaces.

IV. References

1.   D. Andrica, L. Ţopan – *Analytic Geometry*, Cluj University Press, 2004
2. M. Audin – *Geometry*, Springer, 2003
3. M. Berger – *Geometry* (vol. I şi II), Springer, 1987
4. P. A. Blaga – *Lectures on Classical Differential Geometry*, Risoprint, 2005
5. D. Dogaru – *Elemente de grafică tridimensională*, Editura Ştiinţifică şi Enciclopedică, 1988
6. P. A. Eggerton, W.S. Hall – *Computer Graphics (Mathematical First Steps)*, Prentice Hall, 1999
7. N.N. Golovanov – *Geometriceskoe modelirovanie*, Izd. Fizmatlit, 2002 (în limba rusă)
8. C.F. Hoffmann – *Geometric and Solid Modeling*, Morgan Kaufmann, 1989
9. M.E. Mortenson – *Geometric Modeling* (ediţia a II-a), John Wiley, 1995

10. D.F. Rogers, J.A. Adams – *Mathematical Elements for Computer Graphics* (ediția a II-a), McGraw-Hill, 1990

V. Evaluation:

Oral final exam, as 70% on the final grade. The remained 30% comes from homeworks, that students must solve during the semester. The activity on the seminary will be taken into account.

VI. Organizing details, exceptional situations:

Copying during the exam has as consequence the grade 1(one). Appeals are made personally or by e-mail within 24 hours of the announcement of the final grades.