BSE3206 Computer Graphics (4CU)

Course objectives: Upon successful completion of this course students should be able to: (i) Demonstrate knowledge of a general purpose graphics system and its use; (ii) Show that consistent design of user interfaces based on existing standards are important; and (iii) Appreciate the domain of computer graphics and graphical user interfaces in general.

Course content: The course includes: graphics hardware, geometrical transformations, surface and volume visualization, design and implementation of graphical user interfaces. Two dimensional imaging processes. Computer graphics applications. Introduction to computer graphics; Display system organization; Display devices and modes; Display file construction and its structure; Graphic primitive-device initialization, view porting and windowing; Line drawing, simple and symmetrical Digital Di. Eventual Analysis (DDA); Arch and circle generating DDAL in e; and polygon clipping algorithms; Curve plotting; Transformations –projections and perspective views; Picture segmentation: Graphics standards-PHIGS and GKS.

References

•Computer Graphics (2nd Edition C Version) -Hearn, D., Baker, M.P. Prentice-Hall,1997 (Entry Level book, good Illustrations):s.n.2176244-2nded. C version 1997,s .n. 2156999-2nd ed. 1994, s.n.2033430-1986.

•Computer Graphics-Principles and Practice (2nd Editionin C). J. D. Foley, A. Van-Dam, S. K. Fainéant J.F. Hughes. Addison-Wesley, 1996. (High level book, good in depth cover of many course a spects.):s.n.2186305-2nded. In C 1996, s .n. 2092107-2nded.1990.

•Interactive Computer Graphics -Functional, Procedural and Device-LevelMethods.P.BurgerandD.Gillies.Addison-Wesley,1989. (Little correspondence with course, old fashioned.) s. n. 2096479.

•Advanced Animation and Rendering Techniques. A.WattandM.Watt.Addison-Wesley, 1992. (Extended material, for further reading and special interests.) s.n.2141145.

•Programming Windows with MFC. Jeff Prosise, Microsoft Press; 2ndedition, 1999. (The book on MFC).

•Open GL Programming Guide. Woo, Manson., etal. Addison-Wesley, 1999(officialOpenGL

Red-book). s. n. 2210662-3rded. 1999,s.n.2141236-1sted. 1993.