UNIVERSITY OF DELTA, AGBOR, NIGERIA
COMPUTING
INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
B.Sc. Information and Communication Technology

UNIDEL-CSC 411: Computer Graphics Virtualization (3 Units; Compulsory; LH=30; PH=45)

Senate-approved Relevance
Graphic visualization is an interesting and growing area of interest in the training of computer graduates. The training of graduates who are knowledgeable and are able to use the application of vector illustration and scanning software programs to the art and design process. This is in tandem with the mission and vision of University of Delta, Agbor, producing competent and qualified graphic designers. The relevance of this is seeing computing graduates of University of Delta with demonstrable potentials and skills to use the computer, and how the computer can aid the artist's and designer's problem-solving process through interactive visual alternative in Delta state and most especially in Nigeria.

Overview
An introduction to the computer as a graphic design and artist's tool. Using operating Systems, students learn basic use and application of vector illustration (Adobe Illustrator), raster image (Adobe Photoshop), and scanning software programs to the art and design process. Emphasis is on "hands on" use of the computer, and how the computer can aid the artist's and designer's problem-solving process through interactive visual alternatives.

Virtualization relies on software to simulate hardware functionality and create a virtual computer system. This enables IT organizations to run more than one virtual system – and multiple operating systems and applications – on a single server. The resulting benefits include economies of scale and greater efficiency.

Objectives
The objectives of this course are to: (i) Differentiate between Vector images and bitmap images. (ii) Identify the items needed for graphic creation (iii) State the problems of associated with graphic visualization (iv) Manipulate visual data such as images and video sequences.(v) Identify application areas of visual data(vi) Identify different areas of graphic application (vii) Utilize different graphic application environments

Learning Outcomes
Upon completion of the course of this course, students should be able to: (i) Identify four graphic hardware devices (ii) List various types graphic software (iii) Identify four types of graphics (iv) Identify different areas of graphic application (v) Utilize two different graphic application environments (vi) Create animation using computer graphics. (v) Identify application areas of visual data

Course Contents

Overview of input/output hardware. Elements of graphics software. Fundamental algorithms. Two-dimensional viewing and transformation. Design for interaction. Introduction to three-dimensional concepts. Digital photography. Video editing. Survey of applications. Virtual environments technology. requirements and applications. Presence. Displays. Programming virtual environments. Devices. An overview of computer graphics for visualization. Scientific visualization techniques. Introduction to computer animation

Minimum Academic Standard

NUC minimum academic standard requirements for facilities.