



St Aloysius College (Autonomous)

Mangaluru

SYLLABUS OF

CBCS – IIIRD SEMESTER

**COMPUTER
APPLICATIONS
(BCA)**

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B.C.A

GRAPHIC DESIGN

G604.3E

Learning Objective : To learn about various technologies in computer graphics, animation and virtual reality system.

Learning Outcome: Students are able to draw primitive graphical shapes and perform transformation techniques. They are also learning about various new technologies developed and their applications.

UNIT I

Elements of Graphic design, digital Editing, Resolution, Introduction of Image, Pixels, Image features & properties,

Vector Graphics, Bitmap Graphics, Graphic design usage in market, different color modes, Color Modes, Importance of Vector software's, CorelDraw Basics

UNIT-II

Importance of Layers, High & Low resolution, Advertisement industry, RGB Levels, Hue & Saturation, Blur, Sharpen, Dodge, Burn, Healing Brush, patch tool, Blending Options, radial & shape blur, Brightness/Contrast, Creating new pattern, Web Images, creating Magazine cover, greeting card, invitations, logos, brochures, certificates.

Text Books:

1. Adobe Photoshop CC Classroom in a Book (Author - Andrew Faulkner)
2. Photoshop CC Bible (Author - Lisa DaNaeDayley)

References:

1. CorelDraw X7: The Official Guide (11th Edition) (Author - Gary David Bouton)
2. Eric Adobe Photoshop CS4 Bible (Paperback) by Stacy Cates, Simon Abrams, Dan Moughamian Publisher: Wiley India Pvt Ltd (July 2009)
3. Phil300 Photoshop-Workshops-DVD: Das Meisterstück In Sachen Tutorials (German) by Stefan Petri (Editorial) Publisher: 4eck Media GmbH (05/2008)

B.C.A
INTERNET OF THINGS
G605.3E

Learning Objectives:

To learn Basic concepts behind IoT and to study design principles for Connected devices, IoT communication protocols , internet based connectivity , Sensor technologies and Sensor data Communication protocols

Learning Outcome :

Students will be fully aware of Technology behind IoT , Design Principles for Connected devices , IoT communication protocols and internet based communication.

UNIT I

Internet of Things Overview : IoT Definition , IoT vision ,smart and hyper connected devices , IoT conceptual framework, IoT Architectural view, Technology behind IoT , Components of IoT system, ,Development tools, APIs and Device interfacing components , Platform and integration tools ,Sources of IoT , M2M communication , M2M architecture, Software and Development tools, IoT examples. **Design Principles for Connected Devices :** Introduction , Modified OSI model for IoT /M2M systems,ITU-T reference model ,Communication technologies. **Design Principles for Web :** Web Communication protocols for connected devices ,Message Communication protocols ,Communication Gateway protocols-SOAP ,REST,HTTP RESTFUL and WEBSOCKETS

UNIT II

Internet Connectivity -Introduction , Internet connectivity , Internet based communication , IP addressing in IoT. Data Acquiring and storage , Organising the data Transactions on stored data. **Internet Connectivity** - Introduction , Internet connectivity , Internet based communication , IP addressing in IoT. Data Acquiring and storage , Organising the data Transactions on stored data.

TEXT BOOK :

1. Arshadeep Bhaga and Vijaya Madiseti, Internet of Things, A Hands an Approach, Universities Press, 2014.
2. Raj Kamal, *Internet of Things: Architecture and Design Principles*, Mc Graw Hill Education .

Reference Books:

1. Rob Barton, Gonzalo Salgueiro, David Hanes, IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things, Cisco Press,2017
