



‘শেখ কামাল আইটি ট্রেনিং এন্ড ইনকিউবেশন সেন্টার  
স্থাপন’ শীর্ষক প্রকল্পের ট্রেনিং মডিউল

## 1. C++ programming Language

1	Introduction to Computer, Introduction to Programming, Introduction to Programming Language, Introduction to IDE, Introduction to Compiler, Introduction to Programming in C++
2	IDE Installation, Hello World Program, Basic syntax of C++, printing text and backslash characters
3	Basic Syntax: Variables, Strings – Working with Text, Use Input, Binary Numbers and Computer Memory, Integer Types, Floating Point Types, Other Types: Char and Bool
4	Operators, Mathematical operations, Conditional statements: if, else, else if, switch-case
5	Introduction to Loop: while, do-while, for, break, continue, Problem solving using conditional statements and looping
6	Introduction to Array: types of array, Declaration of arrays, Initialization, Multidimensional array, Problem solving using array and loop
7	Introduction to String: character array and strings, Use of Strings, using Basic Functions of Strings(strcmp, strlen etc), Implementing String functions manually, Problem solving on strings
8	Introduction to functions: declaration and definition, return type, parameter passing, header and prototype, Using library functions, Implementing user defined functions, Advantages of functions, Problem solving using functions
9	Pointers: Pointers and Arrays, Pointer Arithmetic, Char Arrays, Reversing a String, References, Allocating Memory
10	Object Oriented Programming: objects and classes, Variable vs Object, Defining classes, Attributed and methods, Constructors and Destructors
11	The “Const” Keyword, Copy Constructors, The New Operator, Returning Objects from Functions
12	Arrays and Functions, Namespaces
13	Inheritance , Constructor Inheritance
14	Encapsulation
15	Polymorphism
16	Real world problem with inheritance, encapsulation and polymorphism
17	Odds and Ends: Two’s Complement and Static Variables, Two’s Complement, static Keyword
18	Developing a Program: The Particle Fire Simulation Particle Fire Explosion Using C++ Libraries
19	Developing a Program: The Particle Fire Simulation Acquiring Simple Direct Media Layer
20	Developing a Program: The Particle Fire Simulation, Introduction to SDL, Uses of SDL, A basic SDL Program, Practice problems on SDL
21	Developing a Program: The Particle Fire Simulation Creating an SDL Window
22	Developing a Program: The Particle Fire Simulation Textures, Renderers and Buffers Setting Pixel Colors
23	Developing a Program: The Particle Fire Simulation

	Creating the Screen Class Bit Shifting and Colors Adding a set pixel method
<b>24</b>	Developing a Program: The Particle Fire Simulation Animating Colors Animating Particles
<b>25</b>	Developing a Program: The Particle Fire Simulation Creating an Explosion Ensuring Constant Speed
<b>26</b>	Developing a Program: The Particle Fire Simulation Bitwise “And” Implementing Box Blur Tweaking Particle Motion
<b>27</b>	Developing a Project-1
<b>28</b>	Developing a Project-2
<b>29</b>	Developing a Project-3
<b>30</b>	Developing a Project-4
<b>31</b>	Discussion on overall course, use of this course, discussion on problem solving and virtual judge
<b>32</b>	Bonus: Object Oriented Design Considerations, Postix and Prefix, Creating Static Libraries

## **2. Entrepreneurship Development and Management of IT/ITES service center**

- A. Definition of entrepreneurship
- B. historical background,
- C. rural, village and cottage industries
- D. entrepreneurial competencies
- E. characteristics and qualities
- F. charms of entrepreneur
- G. case studies and group discussions
- H. real life examples of successful entrepreneurs and their background
- I. comparison of entrepreneurs and managers
- J. Types of motivation
- K. Entrepreneurial Motivation
- L. David McClelland's achievement motivation model
- M. exercises such as ring toss etc. to understand risk taking behavior
- N. Techniques and tools to improve creativity and innovation
- O. impact on idea and business idea generation
- P. psychological background of idea generation
- Q. exercises through idea generation lab
- R. Business plan and components of business plan
- S. environment scanning
- T. market survey
- U. feasibility studies
- V. project report preparation
- W. exercises financial statement analysis: financial ratios
- X. Bangladesh Environment for Entrepreneurship: key regulations and legal aspects
- Y. Acts and its implications,
- Z. Definition of MSMEs vis a vis other countries
- AA. schemes and policies of the Ministry of MSME
- BB. role and responsibilities of various government organizations, departments, banks etc.,
- CC. Role of State governments in terms of infrastructure developments and support etc.,
- DD. Public private partnerships, National Skill development Mission,
- EE. Credit Guarantee Fund, PMEGP, discussions, group exercises etc.
- FF. Issues and problems faced by micro and small enterprises and effective
- GG. management of M and S
- HH. enterprises (risk management, credit availability, technology innovation, supply chain management, linkage with large industries), exercises
- II. Social entrepreneurship
- JJ. role and need for entrepreneurship development, EDP cell, role of sustainability and sustainable development for SMEs, case studies, exercises.
- KK. Challenges for entrepreneurs and prospects through e Marketing, future
- LL. openings through FDI.

### 3. Web Application Development and Outsourcing Technique (For Beginners)

- A. HTML, HTML5, JS, JQ, CSS3 (2-12)
- B. PHP (19-29)
- C. MYSQL (13-18)
- D. WordPress (30-32)
- E. Laravel (33-35)
- F. Final Project Implement & Deployment (26-29,32,37,39)
- G. Outsourcing Technique (36,38)

Day	Topics
<b>1</b>	Course Intro and basic introduction of internet –DNS, IP Address, Hosting website
<b>2</b>	Intro to HTML, how it works, HTML metadata, paragraph, heading, images
<b>3</b>	HTML tables, hyperlinks, divs and spans, block and inline,
<b>4</b>	HTML forms , HTML5
<b>5</b>	Intro to CSS, adding CSS, CSS colors, background, positioning, selectors
<b>6</b>	CSS Text effects, Box Effects, CSS Floats, Overflow CSS
<b>7</b>	Photoshop to CSS, Intro to CSS3
<b>8</b>	Simple Assignment using HTML and CSS and Assessment
<b>9</b>	Intro to JavaScript and fundamentals- variables, operators, functions
<b>10</b>	JavaScript array, object, condition, loops
<b>11</b>	Editing CSS with JavaScript, Using jQuery
<b>12</b>	Simple JavaScript shopping interface assignment
<b>13</b>	Intro to MYSQL, Installation of MYSQL Server in windows/linux/MAC
<b>14</b>	Creating a database, connect with remote database, creating a table, drop table, truncate table, describe table, alter table, insert, select
<b>15</b>	MYSQL Database structure : Primary Key, Unique Key, Foreign Key, Not Null, Auto Increment, Default
<b>16</b>	MYSQL Examples of – Where, distinct, Count, AND, OR, Order By, Limit, Update, Delete
<b>17</b>	MYSQL queries : Between, AS, IN, LIKE & Wildcards, Copy table, Create Table Like, UNION
<b>18</b>	MYSQL Joins : Inner join, Left Join, Right Join, Full join
<b>19</b>	Intro to PHP, Local development environment and software install, Code Editor Installation
<b>20</b>	Embedding PHP in HTML, using dynamic data, inserting comments in PHP
<b>21</b>	Variables in PHP, Math, Arrays, Associative Arrays, IF statements, Comparison and Logical operators, Switch statements
<b>22</b>	While loop, For loop, for each loop, PHP functions, function parameters, return values
<b>23</b>	Global variables , scope , constant, math functions, string functions, array functions
<b>24</b>	PHP Form , Extracting information from form, validating form, External Page Submission

<b>25</b>	Connect to Database in PHP, PHPMyAdmin, Creating db, tables and inserting data
<b>26</b>	<b>Project Proposal</b> Creating a login page, Receiving post data, DB Read and write using PHP
<b>27</b>	Project Review PHP Security, SQL Injection, Password Encryption
<b>28</b>	Revised Project Proposal Cookies, GET, POST, Sessions in PHP
<b>29</b>	Project Development-1 Object oriented PHP, Class, method, Constructor and Data access
<b>30</b>	Intro to WordPress, Installing WordPress and orientation with WordPress editor, library, dashboard
<b>31</b>	WordPress settings, Website content with posts and pages, Homepage, Creating legal pages
<b>32</b>	Project Development-2 Website Navigation, WordPress Security
<b>33</b>	Intro to Laravel, Routes, Controllers and Blade Templating Engine
<b>34</b>	Database : Laravel Migrations Raw SQL Queries
<b>35</b>	Database : Eloquent/ORM
<b>36</b>	Discussion on overall course, use of this course, discussion on Outsourcing Technique
<b>37</b>	Project Development-3
<b>38</b>	Expert Talk on Outsourcing Techniques
<b>39</b>	Project Deployment and Project Showcasing
<b>40</b>	Overall course review

## 4. Web Site Design (Advance)

- A. Fundamental of Web Designing (1-4)
- B. Photoshop (5-10)
- C. HTML5 and CSS (11-17)
- D. JavaScript (18-20)
- E. JQuery (21-24)
- F. CMS (WordPress) (25-31)

Day	Topics
1	Intro to Web designing, basic principles
2	Responsive Web Design, Device breakpoints, Examples of adaptive layout
3	Media Queries, Testing simples media queries, Best practices
4	Building a Fluid Layout, Fluid Width Layout, Percent width layout
5	Intro to Photoshop, Installation , Basic Functionality
6	Grid Systems, Bootstrap, Measuring, Eye Dropper, Transform
7	Vector Shapes, Expanding and fixed width text boxes, Layers,
8	Using Images and icons – clipping mask , embedding, rounded corner, background images
9	Layer grouping, search and naming
10	Forms and footers, Designing for mobile website view, Exporting website design
11	Intro to HTML, how it works, HTML metadata, paragraph, heading, images
12	HTML tables, hyperlinks, divs and spans, block and inline,
13	HTML forms , HTML5
14	Intro to CSS, adding CSS, CSS colors, background, positioning, selectors
15	CSS Text effects, Box Effects, CSS Floats, Overflow CSS
16	Photoshop to CSS, Intro to CSS3
17	Simple Assignment using HTML and CSS and Assessment
18	Intro to JavaScript and fundamentals, variables
19	JavaScript array, object, condition, loops and functions
20	JavaScript for dynamic content generations
21	Element Selectors and Animations with jQuery
22	Manipulating DOM with jQuery, Handling mouse and keyboard events,
23	Forms and Ajax with jQuery
24	Editing CSS with JavaScript, Using jQuery
25	Intro to WordPress, Installing WordPress
26	Project Proposal and review
27	orientation with WordPress editor, dashboard Project Progress-1
28	WordPress settings, Website content with posts and pages, Homepage, Creating legal pages
29	WordPress Plugins and library
30	website navigation, Project Progress-2
31	WordPress security, Project Progress-3
32	Project Deployment and Project Showcasing
33	Overall course review

## 5. Graphic Design

### Part-1

- Fundamental of Graphic Design
- Computer Application and Multimedia
- Managing Media Element
- Concept of Multimedia Presentation
- Image Editing with Photoshop
- Visualization Technique
- Digital Drawing with Illustration
- Internet Technology
- Freelancing Guideline
- Color Studies
- Typography
- Project Work (Business Card, Logo, Flyer, Brochure, Banner, Web Template etc.)
- **SOFTWARE TAUGHT**
  - MS Power Point 2007 - 2013
  - Adobe Photoshop CS6 - CC
  - Adobe Illustrator CS6 - CC
  - Adobe InDesign CS6 – CC
- **Highlights**
  - Practical application using latest versions of software like Adobe Illustrator, Photoshop, InDesign and E-Project.
  - Hands-on training using latest tools & techniques.
  - Specialization & creating portfolio in the area of interest.
  - Industry-relevant curriculum.

### Part-2

- Principles of Graphic Design
- Managing Media Element
- Visualization Technique
- Glamour Image Retouch
- Animated Banner Design
- Business Card Design
- Flyer Design
- Facebook Timeline Cover Design
- Brochure Design
- Web Template Layout Sketch
- Web Template Design (Theme Forest Standard)
- Freelancing Guideline
- Outsourcing Marketplace
- Logo Concept Realization
- Logo Sketch by Hand
- Logo Making in Illustrator
- Banner Design
- Office Identity/Stationary Design
- Trifold/Fourfold Brochure Design
- Certificate Design



- Resume Design
- T-Shirt Design
- Product Packaging Design
- SOFTWARE TAUGHT
  - Adobe Photoshop CS6 - CC
  - Adobe Illustrator CS6 – CC
- HIGHLIGHT
  - Practical application using latest versions of software like Adobe Illustrator, Photoshop, InDesign and E-Project.
  - Hands-on training using latest tools & techniques.
  - Specialization & creating portfolio in the area of interest.
  - Industry-relevant curriculum.
  - Proper guideline about Freelancing Career.
- Career Support
  - Graphics Designer
  - Creative Director
  - Creative Executive
  - Brand Promoter
  - Photoshop Artist
  - Logo Designer
  - Photoshop Artist
  - Pre-Press Technician
  - Visualizer

## 6. Video Editing

### A. Adobe Premier Pro

- a. Touring Adobe Premiere Pro CC
- b. Setting Up a Project
- c. Importing Media
- d. Organizing Media
- e. Mastering the Essentials of Video Editing
- f. Working with Clips and Markers
- g. Adding Transitions
- h. Performing Advanced Editing Techniques
- i. Putting Clips in Motion
- j. Multi camera Editing
- k. Editing and Mixing Audio
- l. Sweetening Sound
- m. Adding Video Effects
- n. Improving Clips with Color Correction and Grading
- o. Exploring Compositing Techniques
- p. Creating Titles
- q. Managing Your Projects
- r. Exporting Frames, Clips, and Sequences

### B. Adobe After Effects

- a. Getting to Know the Workflow
- b. Creating a Basic Animation Using Effects and Presets
- c. Animating Text
- d. Working with Shape Layers
- e. Animating a Multimedia Presentation
- f. Animating Layers
- g. Working with Masks
- h. Distorting Objects with the Puppet Tools
- i. Using the Roto Brush Tool
- j. Performing Color Correction
- k. Using 3D Features
- l. Working with the 3D Camera Tracker
- m. Advanced Editing Techniques
- n. Rendering and Outputting

### C. Adobe Audition

- a. Audio interfacing
- b. The Audition environment
- c. Basic Editing
- d. Signal processing
- e. Audio Restoration
- f. Mastering
- g. Sound design
- h. Creating and recording files
- i. Basic multitrack orientation
- j. The Multitrack Mixer View
- k. Editing Clips
- l. Creating music with sound libraries

- m. Recording in the Multitrack Editor
- n. Automation
- o. Mixing strategies
- p. Working with Video

**D. Overview of Creative Cloud**

## 7. 3D Animation

### Modules:

- Introduction to 3D Animation
- Auto Cad Drawing
- Creating a 3D scene from primitives
- Polygon mesh editing tools
- Materials and Texturing
- Cameras and lighting
- Animation, Rendering and Output Techniques
- NURBS and spline-based modeling
- Animating a simple character
- Dynamic particle systems
- Mental Ray and special topics in 3D rendering
- Video Editing
- Special Effects Composition

### Overall:

#### A. Autodesk 3d Max

- a. Exploring 3ds Max Interface
- b. Modeling with splines
- c. Modeling with polygons
- d. Introduction to materials and basic texturing
- e. Assignments and architectural projects overview
- f. Basic lighting and default rendering with 3ds max
- g. Mappings and UV workflow
- h. Use of motion capturing data and biped animation
- i. Advanced Rendering option with Mental Ray- Part I
- j. Advanced Rendering option with Mental Ray- Part II
- k. Projects: Architectural
- l. Revision and project assistance.
- m. Doubts and project corrections.

#### B. Autodesk 3d Maya

- a. Exploring the interface of Autodesk Maya
- b. Modeling I
- c. Modeling II
- d. Texturing and UV mapping
- e. Basic Lighting and their various attributes
- f. Animating with Deformers and Motion Path
- g. Understanding various connection assistant used as rigging
- h. Rigging – Part I
- i. Rigging – Part II
- j. Character Animation Techniques
- k. Texturing and Lighting with mental ray and
- l. Paint Effects and visors
- m. Rendering for Compositing
- n. Introducing nParticles
- o. Dynamic Effects
- p. Fur, Hair, and Clothing

- q. Maya Fluids

### **C. Vray**

- a. Getting to know vray
- b. Key light tools
- c. Global Illumination
- d. Vray Materials and Maps
- e. Quality Control with Image Sampling
- f. Working with Cameras
- g. The Vray Physical Camera
- h. Vray 3 & the 3ds Max Physical Camera
- i. The Vray FX tools

### **Software Taught**

- Auto Cad 3D
- 3Ds Max Advance
- 3Ds Maya
- Adobe Premiere
- After Effect
- Rendering

### **Highlight**

- Drawing & Perspective of 3D Modeling
- Light, Color & Design
- History of Film & Animation
- Principles of Animation
- Storytelling & Scriptwriting
- Fundamentals for Creative Professionals
- Idea Jumpstart
- Sports & Wellness
- Figure Drawing
- Practical application using latest versions of tools / software like Auto Cad, 3Ds Max, V-ray, Adobe Premiere.
- Hands-on training using latest tools & techniques
- Specialization & creating portfolio in the area of interest
- Industry-relevant curriculum

### **Career Support**

- 3D (Three-Dimensions) Designer
- Special Effects Artiste, Animator
- 3D Compositor / Modeler
- Motion Graphic Artist
- Visual Effects Artist
- Game Design Animator
- Shedders
- Modelers
- Bench Animators

## 8. Android Application Development

### A. Java Technology

- a. Concepts of OOPS
- b. Relating Object Oriented

### B. Approach To Real World

- a. Create Class and Object
- b. Create different types of Constructors
- c. "this" keyword
- d. Encapsulation
- e. Applying encapsulation for Java classes
- f. Need of packages
- g. Create Packages
- h. Access modifiers
- i. Inheritance and its types
- j. Dynamic polymorphism

### C. Introduction to abstraction

- a. Abstract methods and classes
- b. Introduction to interfaces
- c. Implementing abstract class and interfaces

### D. Exceptions

- a. try, catch block
- b. throw and throws
- c. custom exceptions
- d. finally
- e. common exceptions

### E. Understand threads

- a. Types of threads
- b. Life cycle of threads
- c. Synchronization
- d. Dead locks

### F. Understand Collection Framework

- a. Collection Interfaces and their implementation classes
- b. Iterator, Comparator and Comparable
- c. Generic Collections
- d. Legacy classes
- e. Utility classes

### G. Streams and IO Streams

- a. Byte Stream and Character Stream
- b. Input and Output Readers
- c. Read or Write data to/from
- d. Types of Streams
- e. Methods of Streams

### H. What is Android?

- a. A Short History
- b. Download & Install Android Studio with SDK

**I. Android Architecture**

- a. Dalvik Debug Monitor Server (DDMS)
- b. ADB Tools, AAPT etc
- c. Creating a Project
- d. Running Your Application

**J. Android Studio IDE**

- a. Dalvik Debug Monitor Server (DDMS)
- b. ADB Tools, AAPT etc
- c. Creating a Project
- d. Running Your Application

**K. Android Directory Structure and Debugging**

- a. Run Configuration
- b. Debugging an Application
- c. Activity/services/receiver declarations
- d. Resources & R.java
- e. Values – strings.xml
- f. Layouts & Drawable Resources

**L. Activities and Activity lifecycle**

- a. Launching an Activity
- b. Pausing and Stopping an Activity
- c. Destroying an Activity
- d. Registering an Activity
- e. The Default Activity
- f. The Application Class
- g. The Application Context

**M. Launching emulator**

- a. Editing emulator settings
- b. Emulator shortcuts
- c. Logcat usage

**N. Introduction to DDMS**

- a. File explorer
- b. Second App (switching between activities)

**O. Simple GUI's**

- a. Selection Widgets & Toast
- b. Dates and Times
- c. Tabbed Views
- d. Text View and Edit Text
- e. Button
- f. Check Box
- g. Creating Views
- h. View Hierarchy
- i. Creating Views Programmatically
- j. Toggle Button
- k. Rating Bar
- l. Creating View in XML Layout
- m. More on XML Layout
- n. Common Programming Tasks with Views

**P. Android Layout Types**

- a. Layout Attributes
- b. View Identification
- c. Different types of layout examples
- d. Event Listeners & Event Handlers

**Q. Event Listeners Registration**

- a. Touch Mode
- b. Focus
- c. Event Handling Examples
- d. Using programmatic approach
- e. Event Listeners & Event Handlers
- f. Event Listeners Registration
- g. Using XML configuration approach

**R. Intents**

- a. The android.content.Intent Class
- b. Explicitly Specifying Component's Class
- c. Implicit Target Component Specification
- d. Intent Filters
- e. Data Type Filter
- f. Action Name
- g. Category Name
- h. Starting an Activity
- i. Getting Output from Activity
- j. Pending Intent

**S. Defining Menu Items**

- a. Menu XML File
- b. Option Menu
- c. Populating Menu Items from Resource
- d. Manipulating Menu Items
- e. Handling Menu Item Click Event
- f. Context Menu
- g. Showing a Context Menu
- h. Handling a Context Menu Item Click

**T. Toast**

- a. Popping a Toast
- b. Advanced Toast
- c. Status Bar Notification
- d. Advantages of Status Bar Notification
- e. Steps to Create a Status Bar Notification
- f. Posting the Notification
- g. Using a Utility Method

**U. Using Dialogs**

- a. Alert Dialogs
- b. Handling Button Click Events

**V. Progress Dialog**

- a. Setting Progress Amount
- b. Spinner View
- c. Handling Item Selection Event



**W. The Adapter Model**

- a. Custom Adapter Class
- b. Using an Adapter
- c. Using a Custom Row Layout
- d. Array adapter
- e. Cursor adapter
- f. Image adapter

**X. What is a Service?**

- a. Creating a Service
- b. Starting and Stopping a Service
- c. Starting Long Running Work
- d. Sending Control Messages to a Service
- e. Usability Guidelines
- f. Service Lifecycle
- g. Background services
- h. How to start and stop background services
- i. Configure services in app

**Y. Developing a Broadcast Receiver Component**

- a. Registering a Receiver
- b. Broadcasting a Custom Intent
- c. Unregister dynamically registered receiver
- d. Long running operations

**Z. Restrictions for defining Broadcast Receiver**

- a. Sticky Broadcast Intents
- b. System broadcasts
- c. Automatically starting Services from a Receivers

**AA. Data Storage Options**

- a. Data Privacy
- b. Shared Preferences
- c. Modifying Shared Preferences
- d. Default Preferences
- e. Editing Preferences
- f. Internal Storage
- g. Private Directory
- h. Cache Directory

**BB. External Storage**

- a. Checking State of External Storage
- b. Working with Files in External Storage
- c. Shipping Files with the Application
- d. Working with Raw Resource Files
- e. Working with Asset Files
- f. Using the external storage
- g. Getting access to external storage
- h. Checking media availability
- i. Saving files that can be shared with other apps
- j. Saving files that are app-private

### **CC. Reading and Writing a file to SD card sample program in Android**

- a. SQLite Programming
- b. SQLiteOpenHelper
- c. SQLiteDatabase
- d. Inserting Data
- e. Updating Data
- f. Deleting Data

### **DD. Fetching Data**

- a. Transaction Management
- b. A Pattern for Connection and Transaction Handling
- c. Example Queries
- d. Iterating Over a Cursor
- e. Cursor Management
- f. Binding Cursor to ListView
- g. Custom Data Binding
- h. Handling Item Click Event
- i. Refreshing the ListView
- j. Schema Creation Issues
- k. Using the Helper Class
- l. Content providers overview
- m. Using existing Android content providers
- n. Creating own content providers
- o. Using custom made content providers
- p. Implement the query () Method
- q. Implement the insert() Method
- r. The update() and delete() Methods
- s. Implement getType()
- t. Registering a Provider
- u. Writing a Data Consumer
- v. Performing a Query

### **EE. Common Uses of Telephony API**

- a. Making a Phone Call
- b. Sending SMS Message
- c. Call and Service State
- d. Monitoring Call and Service State
- e. Register the Listener
- f. Getting Detail Phone Information
- g. Recording Audio
- h. Start Recording Audio
- i. Stop Recording
- j. Playing Audio

### **FF. Playing from Raw Resource**

- a. Playing from a File or Network Stream
- b. Stopping and Cleanup
- c. Video Playback
- d. Playing Video

### **GG. Android Sensors**

- a. SensorManager
- b. SENSOR\_SERVICE

- c. `Sensor.TYPE_ACCELEROMETER` with example
- d. `SensorEvent` and `SensorEventListener`
- e. `Sensor.TYPE_ORIENTATION` with example
- f. Guidelines for Obtaining Current Location
- g. Obtaining Current Location from an Activity or Service
- h. Reading Location Data
- i. Other Considerations, Proximity Alert

## **9. Network Administration (Windows & Linux)**

- A. IT Foundations
- B. Intermediate Algebra
- C. College Algebra
- D. Network and Security – Foundations
- E. Introduction to Probability and Statistics
- F. Operating System
- G. Networks
- H. Web Development Foundations
- I. Data Management
- J. Scripting and Programming
- K. Network and Security – Applications
- L. Business of IT – Applications
- M. Network Policies and Services Management
- N. Spreadsheets
- O. Server Administration
- P. Network Reliability and Fault Tolerance
- Q. Business of IT - Project Management
- R. IT Capstone Written Project

## **10. Computer Hardware, Troubleshoot**

### **A. Computer hardware**

- a. Before entering the field, students should have a thorough understanding of the various interlocking parts of a computer and how they function together. Certain courses may require students to take computers apart and re-assemble them to demonstrate their intimate familiarity with PC hardware.

### **B. Troubleshooting**

- b. Students learn how to locate and identify the sources of hardware problems, including running tests and various other fault-finding techniques. Students will also learn how to take action to correct these problems, including replacing or upgrading troublesome parts and making repairs.

### **C. Operating System**

- c. Software that supports a computer's basic functions, such as scheduling tasks, executing applications, and controlling peripherals.

### **D. Software basics**

- d. Although students will typically focus on tackling hardware issues, they should also be prepared to face software problems in their working lives, as they should expect clients to reach out to them with any number of PC problems. These courses teach students how to identify and remove computer viruses and handle other software malfunctions.

## 11. Search Engine Optimization (SEO)

- What is SEO?
- Introduction to SERP
- What are search engines?
- How search engines work
- Major functions of a search engine
- What are keywords?
- Different types of keywords
- Google keyword planner tool
- Keywords research process
- Understanding keywords mix
- Google Operator : So that you can find anything on the web
- On page optimization
  - a) What are primary keywords, secondary keywords and tertiary keywords?
  - b) Keywords optimization
  - c) Content optimization & planning
  - d) Understanding your audience for content planning
  - e) What is the difference between keywords stuffing & keyword placement
  - f) Internal linking
  - g) Meta tags creation
  - h) Creating Webpage in HTML
  - i) Using google webmasters tool & website verification
  - j) Sitemap creation & submission in website & webmasters
  - k) How to write an optimized content
  - l) How to write a content for article, blog and press release
- Off Page optimization
  - Off Page optimization
  - What is Domain Authority?
  - How to increase Domain Authority
  - What are back links?
  - Types of back links
  - What is link building?
  - Types of link building
  - Do's and Don'ts of link building
  - Link building strategies for your business
  - Easy link acquisition techniques
- Local SEO
  - Google places optimization
  - Classified submissions
  - Using H card
  - Citation
- Top tools for SEO
- Monitoring SEO process
- Preparing SEO reports
- How to create SEO Strategy for your business
- What is link juice?
- Importance of domain and page authority

- How to optimize exact keywords for your business
- How to save your site from Google Panda, Penguin and EMD Update
- How to recover your site from Panda, Penguin and EMD

## 12. Digital Marketing

### Digital marketing Overview (3 Hours)

- What is Digital Marketing?
- Understanding Marketing Process
- Why Digital Marketing Wins Over traditional Marketing?
- Understanding Digital Marketing Process
  - Increasing Visibility
    - What is visibility?
    - Types of visibility
    - Examples of visibility
  - Visitors Engagement
    - What is engagement?
    - Why it is important?
    - Examples of engagement
  - Bringing Targeted Traffic
    - Inbound
    - Outbound
  - Converting Traffic into Leads
    - Types of Conversion
    - Understanding Conversion Process
  - Retention
    - Why it is Important?
    - Types of Retention
  - Performance Evaluation
    - Why it is Important?
    - Tools Needed
- Scope and Career in Digital marketing in Bangladesh

### Website Planning and Creation ( 6 Hours)

- Understanding Internet
- Difference between Internet & web
- Understanding websites
- Understanding domain names & domain extensions
- What is web server & web hosting
- Different types of web servers
- Different types of websites
  - Based on functionality
  - Based on purpose
- Planning & Conceptualizing a Website
  - Booking a domain name & web hosting
  - Adding domain name to web Server
  - Adding webpages & content
  - Adding Plugins
- Building website using CMS in Class
  - Identifying objective of website
  - Deciding on number of pages required



- Planning for engagement options
- Creating blueprint of every webpage
- Best & Worst Examples

### **E-mail Marketing (15 Hour)**

- What is email marketing?
- How email works?
- Challenges faced in sending bulk emails
- How to overcome these challenges?
- Types of email marketing- Opt-in & bulk emailing
- What is opt-in email marketing?
- Setting up email marketing account
- Best platforms to do opt-in email marketing
- Setting up lists & web form
- Creating a broadcast email
- What are auto responders?
- Setting up auto responders
- How to do bulk emailing?
- Best practices to send bulk emails
- Tricks to land in inbox instead of spam folder
- Top email marketing software's & a glimpse of how to use them
- Improving ROI with A/B testing

### **Social Media Marketing (24 Hours)**

- What is Social Media?
- Understanding the existing Social Media paradigms & psychology
- How social media marketing is different than others
- Forms of Internet marketing

### **Facebook marketing**

- Understanding Facebook marketing
- Practical session 1
  - Creating Facebook page
  - Uploading contacts for invitation
  - Exercise on fan page wall posting
- Increasing fans on fan page
- How to do marketing on fan page (with examples)
  - Fan engagement
  - Important apps to do fan page marketing
  - Facebook advertising
  - Types of Facebook advertising
  - Best practices for Facebook advertising
  - Understanding Facebook best practices
  - Understanding edgerank and art of engagement
  - Practical Session 2
    - Creating Facebook advertising campaign
    - Targeting in ad campaign
    - Payment module- CPC vs CPM vs CPA
    - Setting up conversion tracking

- Using power editor tool for adv.
- Advanced Facebook advertising using tools like Qwaya

### **Video marketing**

- Video Marketing
- Understanding Video Campaign
- Creating 1st Video Campaign
- Importance of video marketing
- Benefits of video marketing
- Uploading videos on video marketing websites
- Using youtube for business
- Developing youtube video marketing Strategy
- Bringing visitors from youtube videos to your website
- Creating Video AD groups
- Targeting Options
- Understanding Bid Strategy

### **Linkedin Marketing**

- What is LinkedIn?
- Understanding LinkedIn
- Company profile vs Individual profiles
- Understanding LinkedIn groups
- How to do marketing on LinkedIn groups
- LinkedIn advertising & it's best practices
- Increasing ROI from LinkedIn ads
- LinkedIn publishing
- Company pages
- Adv on linkedIn
- Display vs text

### **Twitter Marketing**

- Twitter Marketing
- Understanding Twitter
- Tools to listen & measure Influence on Twitter: TweetDeck, Klout, PeerIndex
- How to do marketing on Twitter
- Black hat techniques of twitter marketing
- Advertising on Twitter
- Creating campaigns
- Types of ads
- Tools for twitter marketing
- Twitter Advertising
- Twitter Cards

### **Search Engine Optimization ( 21 Hours)**

- What is SEO?
- Introduction to SERP
- What are search engines?
- How search engines work
- Major functions of a search engine

- What are keywords?
- Different types of keywords
- Google keyword planner tool
- Keywords research process
- Understanding keywords mix
- Google Operator : So that you can find anything on the web
- On page optimization
  - a) What are primary keywords, secondary keywords and tertiary keywords?
  - b) Keywords optimization
  - c) Content optimization & planning
  - d) Understanding your audience for content planning
  - e) What is the difference between keywords stuffing & keyword placement
  - f) Internal linking
  - g) Meta tags creation
  - h) Creating Webpage in HTML
  - i) Using google webmasters tool & website verification
  - j) Sitemap creation & submission in website & webmasters
  - k) How to write an optimized content
  - l) How to write a content for article, blog and press release
- Off Page optimization
  - Off Page optimization
  - What is Domain Authority?
  - How to increase Domain Authority
  - What are back links?
  - Types of back links
  - What is link building?
  - Types of link building
  - Do's and Don'ts of link building
  - Link building strategies for your business
  - Easy link acquisition techniques
- Local SEO
  - Google places optimization
  - Classified submissions
  - Using H card
  - Citation
- Top tools for SEO
- Monitoring SEO process
- Preparing SEO reports
- How to create SEO Strategy for your business
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- Importance of domain and page authority
- How to optimize exact keywords for your business
- How to save your site from Google Panda, Penguin and EMD Update
- How to recover your site from Panda, Penguin and EMD

### **Content Marketing (15 Hour)**

- What is Content Marketing?
- Introduction to content marketing
- Objective of content marketing

- Content marketing 7 step strategy building process
- Various types of content with examples
- How to write great compelling content
- Keyword research for content ideas
- Optimizing content for search engines
- Discussing authority blog
- Steps towards developing authority blog
- Ways to monetizing authority blog
- How to market your content?
- Debate- Doesn't great content just spread by itself
- Understanding second customer
- Importance of second customer
- How to increase second customer
- Understanding online influencers
- Ways to connect with online influencers
- 35 unique ways to write magnetic headlines
- Hundreds of examples of magnetic headlines
- How to increase opt-in email list with content marketing with examples
- Case study on content marketing

#### **Affiliate Marketing ( 12 Hours)**

- What is affiliate marketing?
- 3 A's of affiliate marketing
- How people make millions of dollar in affiliate marketing?
- Affiliate marketing history
- Changes in affiliate marketing industry over the year
- Affiliate marketing scenario in India
- How to be a super affiliate?
- Different ways to do affiliate marketing
- Affiliate marketing secrets
- How your trainer makes money in affiliate marketing?
- Live examples of how people are making money as an affiliate
- Getting your started as an affiliate
- Getting you approved as an affiliate from India's top affiliate agencies
- Some of the top affiliate network in the world
- How to get approved as an affiliate by world's top affiliate company-commission
- junction [www.cj.com](http://www.cj.com)
- Trainers shares his secrets of affiliate marketing
- Story telling- trainer shows his live example of how he is making money these
- days as an affiliate

#### **Adsense and Blogging ( 9 Hours)**

- What is adsense?
- How to get approved for adsense?
- Cool trick to get adsense approval by Google
- Using your adsense account interface
- Placing ads on your blog
- Creating blogs with our FREE theme
- Then we will share 1 secret method Through which you will

- make money with adsense

### **E-commerce Marketing ( 9 Hours)**

- What is ecommerce?
- Top ecommerce websites around the world & it's scenario in Baangladesh
- Difference between E-Commerce software and Shopping Cart software
- Payment Gateways, Merchant Accounts & Logistics for physical goods.
- Affiliate Marketing by promoting products which looks like an ecommerce store.
- Case studies on ecommerce websites.
- How to do Google Product Listing Ads (PLA) for ecommerce websites.
- How to do SEO for an ecommerce website

### **Mobile Web Marketing ( 6 Hours)**

- Understanding Mobile Devices
- Mobile Marketing and Social Media
- Mobile Marketing Measurement and Analytics
- Fundamentals of Mobile Marketing
- Key industry terminology
- Creating mobile website through word press
- Using tools to create mobile websites
- Using tools to create mobile app
- Advertising on mobile (App & Web)
  - Targeting ads on Apps
  - Targeting ads via location
  - Targeting ads on search engine
- Content Marketing on mobile
- Mobile strategy-segmentations option targeting and differentiation
- Mobile marketing mix
- SMS marketing
- Creating mobile application
- Uploading mobile app in Android and iOS

## 13. Conducting e-commerce Management

### A. WordPress Introduction and Installation

- a. Introduction Word press
- b. Installation of XAMPP, Wamp
- c. Configuration of Apache / PHP
- d. Common Errors in Installation
- e. Using the Dreamweaver for WordPress

### B. WordPress Basic

- a. What is Word press
- b. Create Database
- c. Install Word press In Local host
- d. Install WordPress and configuration
- e. What is prefix in word press
- f. Change Basic setting
- g. Word press File structure
- h. Difference between Page and Post
- i. How to Change Admin Password in admin
- j. Manage tools
- k. Manage Comment Section
- l. Configure Post Setting
- m. Add category , Tags and posts
- n. Configure Pages and manage it
- o. Manage Media section
- p. Manage Privacy
- q. Manage Permalink on 3 types
- r. Manage multiuser
- s. Allow registration From Website
- t. Manage Plug-in Section
- u. Manage Widgets Section
- v. Manage Menu section

### C. WordPress Theme Customization

- a. How to Change Theme
- b. Basic Knowledge In theme
- c. Create Own Template In theme
- d. How to write Php Code In Admin Page
- e. How to Connection Database In theme
- f. Understanding Function.php
- g. Create Network Website and manage it.
- h. Difference between Page and Post
- i. Create Basic Own Word press Theme
- j. Add Own Section Like left, right
- k. Difference Pages Create and Manage
- l. Add , Edit Theme From Admin
- m. Convert HTML 2 Wordpress
- n. Write Own Php Code In Theme
- o. Develop own Php Section in admin
- p. Add Own section In admin left bar
- q. Understanding Like header, footer etc

- r. Premium Wordpress Theme Manage ,Edit etc
- s. Allow registration From Website
- t. Add Own Blog Section
- u. Different Header, footer include On pages
- v. Create Whole Dynamic Website

#### **D. Menu and Widgets**

- a. Manage Custom Menu
- b. Manage Dropdown Menu
- c. How to create Dynamic Menu
- d. Create Function For Menu
- e. How to use Widgets
- f. Show Widgets anywhere In theme
- g. Create Menu For header, Footer etc
- h. Create Dynamic Menu in admin
- i. Manage Menu By admin and configure
- j. Create Own Widgets and configure it.
- k. Create Unlimited Widgets and use it

#### **E. Plugin**

- a. How to Install Plugin and use it.
- b. How to activated Plugin
- c. How to find Plugin
- d. How to change Plugin color, style etc
- e. Plugin updated
- f. Create own Basic Plugin

#### **F. Custom Post Type**

- a. What is custom Post Type?
- b. How To use Custom Post Type
- c. How to create Custom Post Type
- d. Configure Advanced Custom Post Type.
- e. How to show Custom Post Type in theme

#### **G. Word press Phpmyadmin**

- a. How many word press table.
- b. How to change email , password etc from database
- c. How to change base url in database
- d. Understand Post, page table.
- e. Understanding Category, menu, taxonomy Table.
- f. How to Secure Word press Site From Hackers
- g. Create own table and use it
- h. And many more..

#### **H. Visual Composer (Latest)**

#### **I. WordPress Security**

#### **J. WordPress SEO (On Pages)**

#### **K. Meta Title Optimization**

- a. Meta Description Optimization
- b. Meta Keyword Optimization
- c. Yoast Plugin install and integration

- d. Sitemap Create for users
- e. Facebook Page Create
- f. Image size configuration

**L. Word press Woo commerce**

- a. Install woo-commerce
- b. Adding Product ,category etc
- c. Configure Payment gateway,shipping etc
- d. Change Product page.
- e. Shopping cart Page
- f. Checkout page etc
- g. Covert Shopping site from HTML CSS.
- h. And many more..

**M. Word press Framework**

- a. How to use Options Framework
- b. How to include



## **14. Basic IT/ICT Outsourcing Training for Freelancer (For Men)**

### **Outsourcing Overview**

- What is Outsourcing?
- Understanding the process of Outsourcing
- Global Demand Of Outsourcing
- Scope of Outsourcing
- Common Types of Outsourcing in Global and Bangladesh
- Scope and possibilities of outsourcing in Bangladesh
- Career in Outsourcing

## **15. Basic IT/ICT Outsourcing Training for Freelancer (For Women)**

### **Outsourcing Overview**

- What is Outsourcing?
- Understanding the process of Outsourcing
- Global Demand Of Outsourcing
- Scope of Outsourcing
- Common Types of Outsourcing in Global and Bangladesh
- Scope and possibilities of outsourcing in Bangladesh
- Career in Outsourcing