

Information & Communication Technology (ICT) in Education

Objectives:

After the completion of this course the students will:

- Understand the meaning of ICT and its scope in education
- Know the relationship of computer in ICT
- Use internet based tools for retrieving and sharing information
- Describe basics of computer
- Exhibit capabilities of using computers in education
- Prepare lessons plans, classroom presentation and organize data using computers
- Use internet and E-mail for educational purposes
- Develop a portfolio by using computers

Course outlines:

1. Information Communication Technology (ICT)
 - 1.1. Meaning
 - 1.2. Resources and Applications
 - 1.3. Computer and ICT
 - 1.4. Use in Education
 - 1.4.1. For retrieving information
 - 1.4.2. Organizing and storing information
 - 1.4.3. Sharing and disseminating information
 - 1.5. Scope in Education
2. Introduction to computers
 - 2.1. Component of computer
 - 2.2. Computer hardware and software
 - 2.3. System software and application software
 - 2.4. Central processing Unit
 - 2.5. Storage Devices, Magnetic tape, Magnetic disk, Floppy disk, Flash drive, optical Disk, CD Rom, DVD Rom
 - 2.6. Memory devices
 - 2.7. Input devices Key board, Mouse, Scanner, Cameras etc.
 - 2.8. Output devices monitor, printer, plotter etc.
3. Teacher's and students' tools

- 3.1. Productivity tools
 - 3.1.1. Instructional and creative tasks
 - 3.1.2. Assessment
 - 3.1.3. Record keeping
- 3.2. Internet resources for teachers
 - 3.2.1. Productivity and management tasks
 - 3.2.2. Lesson plans
 - 3.2.3. Digital discussions
 - 3.2.4. E-mail
 - 3.2.5. Discussion forums
 - 3.2.6. Blogs
- 3.3. Internet resources for students
 - 3.3.1. Video conferencing
 - 3.3.2. Web 2.0 tools
 - 3.3.2.1. Blogs
 - 3.3.2.2. Wiki
 - 3.3.2.3. Social network sites
 - 3.3.2.4. Social book marking sites
 - 3.3.2.5. Photo and video sharing
 - 3.3.2.6. Virtual worlds
 - 3.3.3. Search engines
 - 3.3.4. Web sites for children
- 4. Developing Unit Plans
 - 4.1. Developing unit plan template
 - 4.2. Searching unit and lesson plan resources
 - 4.3. Developing right questions
 - 4.4. Bloom's taxonomy
 - 4.5. Developing objectives for the unit plan
 - 4.6. Exploring copy right laws related to computer and software use
- 5. Instructional Resources: Software
 - 5.1. Introduction to educational software
 - 5.2. Software categories
 - 5.2.1. Tutorials
 - 5.2.2. Drill and practice

- 5.2.3. Simulations
 - 5.2.4. Instructional games
 - 5.2.5. Problem solving
 - 5.2.6. Discovery, Reference and other learning tools
- 6. Developing multimedia presentations
 - 6.1. Creating an outline
 - 6.2. Saving the presentation
 - 6.3. Formatting the Slides
 - 6.4. Adding slide animation
 - 6.5. Inserting pictures, recording a voice narration and videos
 - 6.6. Enhancing a presentations
 - 6.7. Setting up a show to run automatically
 - 6.8. Sharing a multimedia presentation on the unit plan
- 7. Using MS Word for Educational Applications
 - 7.1. The writing process
 - 7.2. Developing ideas and content
 - 7.3. Producing drafts
 - 7.4. Developing editing skills
 - 7.5. Adding voice
 - 7.6. Checking for sentence accuracy
 - 7.7. Organizing and publishing
 - 7.8. Writing across the curriculum
 - 7.9. Creating forms
 - 7.10. Using MS Equation Editor
- 8. Using MS Excel in Classroom
 - 8.1. Overview of the Excel window
 - 8.2. Setting up rows and columns for entering data
 - 8.3. Adding and deleting rows and columns
 - 8.4. Creating simple calculations
 - 8.5. Using the built-in formulas in Excel
 - 8.6. Copying data or formulas
 - 8.7. Formatting a worksheet
 - 8.8. Formatting cells
 - 8.9. Using appropriate chars and graphs

8.10. Educational Applications of Excel

8.10.1. Creating a graphing grid

8.10.2. Creating a time table

8.10.3. Creating a time line

8.10.4. Problem solving

f