

Course Title: e-Learning  
Course No. : ICT Ed. 467  
Level: Bachelor  
Semester: Six

Nature of Course: Theoretical + Practical  
Credit Hours: 3 (2T+1P)  
Teaching Hours: 80 (32T+48P)

## 1. Course Description

This course provides the exploration and integration of a broad range of information and communication technologies (ICT) into learning and teaching to improve student learning outcomes. e-Learning is now an essential component of education. Globalization, the proliferation of information available on the Internet and the importance of knowledge-based economies have added a whole new dimension to teaching and learning. We frequently encountered with the words like, e-government, e-Health, e-Payment, e-Business, e-Commerce, e-Books, e-Libraries, e-Learning and so on. Almost everything today has gone electronic, while a few years ago World Wide Web was considered a Privilege, today it is a necessity. Everyone can use and learn from electronic devices. ICT today has the power to transform Education. The new millennium heralds exciting opportunities to diversify the ways in which education is offered. A greater flexibility is provided through online access to learning – when, where and how to do it? Today anyone can obtain education anywhere, anytime through online education. Thus, breaking the shackles of traditional classroom and adapting to new and electronic learning Technologies empowers all learners irrespective of their diversities. This development in ICT has resulted in a learning environment called e-learning. This course is designed for Bachelor of ICT education

## 2. Course Objectives

The general objectives of this course are as follows:

- To gain an understanding of the theories and concepts underlying e-learning
- To improve familiarity with current challenges and issues in LMS
- To apply and implement database driven LMS in pedagogy.

## 3. Specific Objectives and Contents

Specific objectives	Contents
<ul style="list-style-type: none"><li>• sketch the History of e-learning</li><li>• define e-learning and blended learning</li><li>• explain the Characteristics of e-learning</li><li>• distinguish between Synchronous and Asynchronous e-learning</li><li>• classify the e-learning Technologies</li></ul>	<b>UNIT I : E-learning - Concept and Characteristics</b> 1.1. Definition of E-learning 1.2 Characteristics of e- learning 1.3 History of E- learning 1.4 Approaches to E-learning 1.5 E-learning Tools and Technologies 1.6 Communication Tools 1.7 Collaboration Tools

<p>After studying this Unit, you will be able to:</p> <ul style="list-style-type: none"> <li>• explain the features of Learning Management System(LMS)</li> <li>• differentiate LMS from LCMS</li> <li>• list the advantages and Limitations of e-learning</li> <li>• list examples of different Learning Management Systems</li> <li>• use learner management system</li> <li>• explain the importance of e-learning standards</li> </ul>	<p><b>UNIT II: Learning Management System</b></p> <p>2.1 Content Creation Tools/Authoring tools</p> <p>2.2 Delivery and Distribution Tools</p> <p>2.3 Learning Management Systems (LMS)</p> <p>2.4 E-Learning Standards</p> <p>2.5 Advantages and Potential Drawbacks of E-learning</p>
<p>After studying this Unit, you will be able to:</p> <ul style="list-style-type: none"> <li>• list Web 2.0 technology tools</li> <li>• explore the uses of Wiki</li> <li>• describe the features and benefits of blogs and blogging</li> <li>• identify various elements of blog and tools for blogging</li> <li>• explain approaches to integrating blogs in education</li> <li>• describe the meaning and scope of constructivist learning</li> <li>• explore the scope of 5E model in integrating ICT</li> <li>• explore the different dimensions of PBL</li> <li>• describe WebQuest as a learning activity</li> <li>• describe the various features of social bookmarking websites.</li> <li>• create and manage bookmarks</li> <li>• explore the potential of WebQuest for developing twenty first century skills</li> <li>• define Virtual Field Trip</li> <li>• explore the uses of Virtual Field Trip in education</li> <li>• create a Virtual Field Trip</li> </ul>	<p><b>UNIT III: ICT integrated Lesson</b></p> <p>3.1 Introduction</p> <p>3.1.1 Web 2.0 Tools and Technologies</p> <p>3.1.2 Wiki</p> <p>3.1.3 Blog</p> <p>3.1.4 Podcasts</p> <p>3.1.4 Social Network</p> <p>3.1.5 Social Bookmark</p> <p>3.2 Constructivist Learning and ICT</p> <p>3.2.1 5E Approach</p> <p>3.2.2 Project Based Learning (PBL)</p> <p>3.2.3 Web Quest</p> <p>3.2.4 Virtual Field Trip</p>
<p>After studying this Unit, you will be able to:</p> <ul style="list-style-type: none"> <li>• revise the basic concepts related to assessment</li> <li>• explain the role of ICT in assessment</li> <li>• explain the concept of computer assisted and computer adaptive</li> </ul>	<p><b>UNIT IV: ICT in ASSESSMENT</b></p> <p>4.1 Introduction</p> <p>4.2 Meaning and Types of Assessment</p> <p>4.2.1 Types of Assessment</p> <p>4.2.2 Current Trends in Assessment</p> <p>4.3 Role of ICT in Assessment</p> <p>4.3.1 Computer Assisted</p>

<p>testing</p> <ul style="list-style-type: none"> <li>list various technology tools and possibilities for assessment of student learning</li> <li>design and create digital assessment portfolio</li> <li>create tests/ quizzes/rubrics using online and offline software tools</li> <li>explore various digital online and offline assessment alternatives available</li> <li>describe the current and future trends in technology based assessment practices</li> </ul>	<p>Assessment (CAA)</p> <p>4.3.2 Computer Adaptive Testing</p> <p>4.4 Assessment: Digital Tools and Options</p> <p>4.5 E-portfolio</p> <p>4.5.1 Tools for Creating e-portfolio</p> <p>4.5.2 Advantages of e-portfolio</p> <p>4.6 Digital Rubrics</p> <p>4.6.1 Tools for Creating Digital Rubrics</p> <p>4.7 Digital Assessment Alternatives</p> <p>4.7.1 Online Assessment</p> <p>4.7.2 ICT for Self and Peer Assessment</p> <p>4.7.3 Mobile Apps for Assessment</p> <p>4.8 The Trends in Technology Based Assessment</p>
<p>After studying this Unit, you will be able to:</p> <ul style="list-style-type: none"> <li>give an overview of applications of ICT for school administration and management</li> <li>describe the role of ICT in school record keeping and its maintenance</li> <li>use various technologies for record keeping and scheduling</li> <li>use technology effectively for communicating with parents</li> <li>explain the role and functions of school management systems</li> <li>list the different types of assistive technology</li> <li>explain the role of assistive technology in inclusive education</li> <li>explore the application of UDL approach in class room</li> <li>use variety of digital assistive technologies in the class room</li> <li>explain how to plan, manage and implement appropriate ICT infrastructure</li> <li>develop a technology plan for a school</li> </ul>	<p>UNIT V: ICT for Educational Management</p> <p>5.1 Introduction</p> <p>5.2 Role of ICT in School Administration</p> <p>5.2.1 Record Keeping</p> <p>5.2.2 Scheduling</p> <p>5.2.3 Communicating with Parents</p> <p>5.2.4 School Management Tools</p> <p>5.3 Assistive Technology and Inclusion</p> <p>5.3.1 Assistive Technology - Meaning and Nature</p> <p>5.3.2 Types of Digital Assistive Technology</p> <p>5.3.3 Choosing and Using Appropriate AT</p> <p>5.3.4 Universal Design for Learning (UDL)</p> <p>5.3.5 Advantages and Limitations of AT</p> <p>5.4 Managing ICT Infrastructure of the School</p> <p>5.4.1 Automated and ICT Managed School Processes</p> <p>5.4.2 School Management Information System</p> <p>5.4.3 ICT Infrastructure and its Maintenance</p> <p>5.4.4 Technology Plan for the School</p>
<p>After studying this Unit, you will be able to:</p> <ul style="list-style-type: none"> <li>explain the meaning of Teacher Professional Development concept</li> </ul>	<p>UNIT VI: ICT for Teacher Professional Development</p> <p>6.1 Introduction</p> <p>6.2 Teacher Professional Development - Concept</p> <p>6.3 ICT in Teacher Professional</p>

<p>in the context of ICT</p> <ul style="list-style-type: none"> <li>review the scope of ICT as a tool assisting in teaching and managing school activities</li> <li>identify professional development avenues, specifically the ones which use ICT</li> <li>initiate development of e-portfolio of their professional practice</li> </ul>	<p>Development</p> <p>6.3.1 Learning How to Use ICT</p> <p>6.4 Teacher Professional Development through ICT</p> <p>6.4.1 Online Learning Platforms</p> <p>6.4.2 MOOCs</p> <p>6.4.3 Social Media Networks</p> <p>6.4.4 Web 2.0 Technologies</p> <p>6.4.5 Web-conferencing</p> <p>6.5 Teacher Professional Development in Integrating ICT</p> <p>6.5.1 Online videos/ Teaching channels</p> <p>6.5.2 Teacher Portfolio</p> <p>6.5.3 ICT integrated Action Research</p> <p>6.5.4 e-publications</p> <p>6.5.5 Teleconferencing - EDUSAT Experiment</p>
<p>After studying this Unit, you will be able to:</p> <ul style="list-style-type: none"> <li>state the meaning of e-content.</li> <li>explain the process of designing and development of e-content.</li> <li>explain the phases in different instructional design models</li> <li>create e-content for a particular topic.</li> <li>state the meaning of re-usable learning object.</li> <li>describe the use various tools for editing graphics, audio and video.</li> <li>explain how authoring tools are used in creating e-content .</li> <li>explain the meaning and importance of Open Educational Resources</li> <li>explore various Open Educational Resource repositories.</li> <li>use different Open Educational Resources for classroom teaching and learning.</li> <li>explain the meaning and types of Creative Commons Licensing.</li> </ul>	<p>UNIT VI : e-Content and open educational resources</p> <p>7.1 Introduction</p> <p>7.2 Electronic Content (E-content)</p> <p>7.2.1 Designing and Development of E-content</p> <p>7.2.2 Standards of E-content</p> <p>7.2.3 Learning Objects and Re-usability of E-content</p> <p>7.3 E-content Tools</p> <p>7.3.1 Graphics, Audio and Video-Creating and Editing</p> <p>7.3.2 Authoring Tools</p> <p>7.4 Open Educational Resources</p> <p>7.4.1 Meaning and Importance of OER</p> <p>7.4.2 Various OER Initiatives</p> <p>7.4.3 Creative Common Licensing</p>

#### 4.0 Instructional Techniques

The instructional techniques for this course are divided into two groups. First group consists of general instructional techniques applicable to most of the units. The second group consists of specific instructional techniques applicable to particular units.

##### 4.1 General Instructional Techniques

Reading materials will be provided to students in each unit. Lecture preferably with the use of multi-media projector, demonstration, practical classes, discussion, and brain storming are used in all units.

##### 4.2 Specific Instructional Techniques

Demonstration is an essential instructional technique for all units in this course during teaching-learning process. Specifically, demonstration with practical works will be specific instructional technique in this course.

#### 5.0 Evaluation :

Internal Assessment	External Practical Exam/Viva	Semester Examination	Total Marks
40 Points	20 Points	40 Points	100 Points

**Note:** Students must pass separately in internal assessment, external practical exam and semester examination.

##### 5.1 Internal Evaluation (40 Points):

Internal evaluation will be conducted by subject teacher based on following criteria:

- |   |           |
|---|-----------|
| 1) Class Attendance   | 5 points  |
| 2) Learning activities and class performance                      | 5 points  |
| 3) First assignment ( written assignment)                         | 10 points |
| 4) Second assignment (Case Study/project work with presentation ) | 10 points |
| 5) Terminal Examination   | 10 Points |

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Total	40 points
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##### 5.2 Semester Examination (40 Points)

Examination Division, Dean office will conduct final examination at the end of semester.

1) Objective question (Multiple choice 10 questions x 1mark)	10 Points
2) Subjective answer questions (6 questions x 5 marks)	30 Points
Total	40 points

**5.3 External Practical Exam/Viva (20 Points):**

Examination Division, Dean Office will conduct final practical examination at the end of semester.

**5.4 Practical Exam/Viva (20 Points)**

Internal assessment (Record Book-4 points, Project work Presentation- 2, Internal Practical Test-2 Points)	Semester final examination	Total
8 Points	12 Points	20 Points

**6. Recommended Books and References materials (including relevant published articles in national and international journals)**

**Prescribed Texts**

1. Bryn Holmes, John Gardner(2006) , *E-learning: concepts and practice* , Sage Publications Ltd
2. Jason Cole & Helen Foster, *Using Moodle; Teaching with the Popular Open Source Course Management System*, O Reilly Community Press
3. Rosenberg, M.J. (2000a). *E-Learning: Strategies for Delivering Knowledge in the Digital Age*: McGraw-Hill.
4. Singh & Sharma, *E-Learning New Trends and Innovations*, Deep & Deep Publications Private Ltd., New Delhi, 2005

**References**

- Paily M. U. (2013), Creating Constructivist Learning Environment: Role of "Web 2.0" Technology, International Forum of Teaching and Studies, January 1, 2013; retrieved from <https://www.questia.com/read/1P3-2958066361/creating-constructivist-learning-environment-role> [UNIT III]
- <https://www.boundless.com/education/textbooks/boundless-education-textbook/working-with-students-4/teaching-strategies-21/project-based-learning-67-12997/> [[UNIT III]



- <http://www.unescobkk.org/?id=5828> [UNIT III]
- [http://www.edci.purdue.edu/ertmer/docs/PBL\\_Resources.PDF](http://www.edci.purdue.edu/ertmer/docs/PBL_Resources.PDF) [UNIT III]
- [http://en.wikipedia.org/wiki/Social\\_bookmarking](http://en.wikipedia.org/wiki/Social_bookmarking) [UNIT III]

1. Amrein, A. L., & Berliner, D. C. (2002). High-stakes testing, uncertainty, and student learning. Educational Policy Analysis Archives, 10(18). Available at [www.epaa.asu.edu/epaa/v10n18](http://www.epaa.asu.edu/epaa/v10n18). [UNIT IV]

2. Angelo, T. A., & Cross, K. P. (1993). Classroom Assessment Techniques: A Handbook for College Teachers (2nd ed.). San Francisco : Jossey-Bass. [UNIT IV]

3. Aviram, R., & Tami, D. (2004). The Impact of ICT on education: the three opposed paradigms, the lacking discourse. Unpublished manuscript, Beer-Sheva University, Israel.

[UNIT IV]

1. Gielen, G. (2010). E-communic@tion 4 Schools 2 Parents. Eden 2010 Annual Conference. Media Inspirations for Learning. 9-12 june 2010 Valencia. Available at <http://www.edenonline.org> [UNIT V]

2. Keakopa, S. M. (2003). Record keeping and ICT Development: Experiences from Botswana School of Library Archive and Information Studies. University College, London. Available at [www.hotincil.com](http://www.hotincil.com). [UNIT V]

3. Merkley, D., Schmidt, D., Dirksen, C., & Fulher, C. (2006). Enhancing parent-teacher communication using technology: A reading improvement clinic example. Contemporary Issues in Technology and Teacher Education, 6(1), 11-42. Available at <http://www.citejournal.org/vol6/iss1/languagearts/article1.cfm>

[UNIT V]

4. Olmstead, C. (2013). Using technology to increase parent involvement in schools. Tech trends: Linking Research & Practice to Improve Learning, 57(6), 28-37. [UNIT V]

5. Rose, D. & Meyer, A. (2002). Teaching every student in the digital age: Universal design for learning, Alexandria, VA: Association for Supervision and Curriculum Development, 2002. [UNIT V]

6. COL (2015) Commonwealth Certificate for Teacher ICT integration, accessed on 16th January, 2016 from <http://oasis.col.org/> [UNIT VI]

7. InfoDev (2005) Using Technology for Training Teachers Accessed on 16th January, 2016 from <http://infodev.org/articles/using-technology-train-teachers> [UNIT VI]

8. Hart J (2005) Learning in a modern workplace, Accessed on 16<sup>th</sup> January from <http://www.c4lpt.co.uk/blog/> [UNIT VI]

9. Hooker M (2009) Concept Note: The Use of ICT in Teacher Professional Development, Accessed on 16th January 2016 from [http://www.gesci.org/old/files/docman/TPD\\_Workshop-Concept\\_Note.doc](http://www.gesci.org/old/files/docman/TPD_Workshop-Concept_Note.doc)

[UNIT VI]

1. COL (2005). Creating Learning Materials for Open and Distance Learning: A Handbook for Authors and Instructional Designers. Commonwealth of Learning available at <http://oasis.col.org/bitstream/handle/11599/43/odlinstdesignHB.pdf?sequence=1&isAllowed=y> [UNIT VII]
2. Editing Software - Edit Audio, Video, Photos or Graphics [www.nchsoftware.com/software/editing.html](http://www.nchsoftware.com/software/editing.html) [UNIT VII]
3. e-Learning Standards – Course Avenue available at [www.courseavenue.com/e-learning-standards](http://www.courseavenue.com/e-learning-standards) accessed on 19th Jan, 2016 [UNIT VII]
5. Free and Open Source Authoring Tools for e-Learning-eFront Blog available at <http://www.efrontlearning.net/blog/2010/10/open-source-authoring-tools-for-e.html> accessed on 19th Jan, 2016 [UNIT VII]