DIPLOMA IN ICT IN EDUCATION

SYLLABUS

Diploma in Information and Communication Technology (ICT) in Education

The Diploma in ICT in Education programme is an intensive one-year Diploma programme having two semesters. It is designed to equip learners with software, technical, and techno-pedagogical skills and attitudes required in the modern educational workplace.

The Diploma in ICT in Education is a programme that aims to equip students/teachers/teacher educators with the knowledge and skills needed to effectively apply, use, and manage technology when solving problems specifically related to information and communication technologies applied in educational settings. The programme is designed for individuals who want to build a career as an ICT professional and emphasises multiple skill sets, allowing candidates to pursue various options in applying ICT in education. The programme covers a range of topics, including the use of ICT in instruction, learning, and assessment, and the development of good quality teaching and learning materials with ICT. Aspirants of this diploma will learn to determine the information and communication needs of organisations and users, design information/communication solutions to meet those needs and create and manage information systems/communication systems to get the right information to the right people at the right time.

Courses/Modules are taught using a blended learning approach. The faculty will conduct online sessions and learners will be required to take an active part in these sessions and attend all offline sessions, and assessments, and appear in the semester-end examinations. Learners will also prepare and present a project on an assigned topic. The program consists of 40 credit hours of coursework in total including credits for video tutorials, synchronous sessions, discussion forums, assignments, seminar presentations, and 8 credits for a project.

A. Programme Learning Outcomes:

After completing this programme, the learners will be able to:

PLO 1. apply the knowledge of ICT in education.
PLO 2. communicate effectively with a range of audiences, using digital tools.
PLO 3. use the latest techniques, skills, and educational technology tools necessary for enhancing the educational processes.
PLO 4. support and enhance teaching, learning and assessment in online and blended situations.
PLO 5. Use new technologies such as AI and Social Media to enrich their Technology Enabled Learning Environments.
PLO 6. design and develop e-content, e-course and e-assessment in their area of expertise.

B. Programme Layout:

B1. Course Scheme for the Programme

Semester – I

Course Code	Course Title	Credits	Marks
DICTE-101	Introduction to ICT in Education	04	100
DICTE-102	Digital Tools and Resources for Teaching and	04	100
DICTE-103	Pedagogical Approaches for ICT Integration	04	100
DICTE-104	Digital Leadership, Citizenship and Online Safety	04	100
DICTE-105	Assessment and Evaluation in ICT-Enabled	04	100
		20	**500**

Semester – II

Course Code	Course Title	Credits	Marks
DICTE-201	E-Learning Design and Development	04	100
DICTE-202	Professional Development for ICT Integration	04	100
DICTE-203	Experiential Learning in Emerging Trends and Future Directions in Education	04	100
DICTE-204	Project Work	08	200
Total		**20**	**500**

Summary	**Credits**	**Marks**
Semester I	20	500
Semester I	20	500
Total	**40**	**1000**

B2. Semester-wise Course Content of the Programme

Every course excluding Project shall have a total of four credit hours comprising of three theory hours and one practical hour. In higher education, one credit theory hour often equates to 15 hours of teaching or 30 hours of practical or field work per semester. Theory hour shall be composed of synchronous online counselling, webinars, interactive live lectures, e-content, video tutorials, readings (self-study), assignments, asynchronous mentoring, discussion forums, assessment and other forms of online engagement. The practical component of the course will involve interactive workshops, group projects, simulations, and real-world application exercises to provide learners with hands-on experience and practical skills relevant to the course content. In total, a learner must devote 5-7 hours per week to one course.

SEMESTER-I

Introduction to ICT in Education

Course Code :	**DICTE 101**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 04**

a. Course Description

The course is designed to provide educators with the knowledge and skills necessary to understand and explore the fundamentals of ICT in education. Participants will explore the concept, history, and evolution of Information and Communication Technology (ICT) and universal designs & sustainable goals. Throughout the course, participants will delve into four main units. The first unit covers the basics of ICT in education, which includes an introduction to ICT usage frameworks, an understanding of the concept of ICT in education, and an overview of ICT tools and resources used in education. The second unit focuses on the importance and benefits of integrating ICT in education, which includes an understanding of the significance of ICT in education, the benefits of integrating ICT in education, and the challenges and limitations of ICT in education. The third unit covers the evolution of ICT and its impact on education, which includes a historical overview of ICT in education, the impact of ICT on teaching and learning, and future trends in ICT and education. The fourth unit involves details of UDL and SDG's.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. describe the concept of ICT and its scope in education.
CLO 2. identify the benefits of integrating ICT into education.
CLO 3. analyse the role of ICT in transforming teaching and learning.
CLO 4. design learning experiences using the principles of UDL to promote inclusive and equitable learning environments.

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X	X	X	
PLO 2		X		X
PLO 3		X	X	
PLO 4			X	X
PLO 5		X	X	
PLO 6		X	X	X

c. Course Content:

Unit 1. Basics of ICT in Education

a. Introduction to ICT Competencies Frameworks.
b. Understanding the concept of ICT in education.
c. Overview of ICT tools and resources used in education.

Unit 2. Importance and Benefits of Integrating ICT in Education

a. Understanding the significance of ICT in education.

b. Benefits of integrating ICT into education.
c. Challenges and limitations of ICT in education.

Unit 3. Evolution of ICT and its Impact on Education

a. Historical overview of ICT in education.
b. Impact of ICT on teaching and learning.
c. Future trends in ICT and education.

Unit 4. UDL and SDG4

a. Overview of User Experience and Learning Designs.
b. Course on Universal Design for Learning (UDL): Commonwealth of Learning (colcommons.org): This is an introductory course on Universal Design for Learning (UDL) that provides a foundation for developing accessible courses and demonstrates the potential of UDL to make teaching resources and practices more responsive to students' diverse needs and contexts.
c. Overview of Sustainable Development Goals. SDG-4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

d. Suggested readings:

[1] Fu, J. S. (2013). ICT in Education: A Critical Literature Review and Its Implications. International Journal of Education and Development using Information and Communication Technology (IJEDICT), 9(1), 112-125.
[2] UNESCO (2017). Unpacking Sustainable Development Goal 4 (SDG4).
[3] UNESCO (2018). Quick Guide to Education Indicators for SDG 4.
[4] UNESCO (2022). Educational Technology and Student Performance: A Comparative Study.
[5] Hernandez, R. M. (2017). Impact of ICT on Education: Challenges and Perspectives. Propósitos y Representaciones, 5(1), 325-347.
[6] UNESCO (2023). A systematic literature review of ICT integration in secondary education.

Digital Tools and Resources for Teaching and Learning

Course Code :	**DICTE 102**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 04**

a. Course Description

This course is designed to equip educators with the knowledge and skills necessary to effectively integrate technology into their teaching practices. Participants will explore a wide range of digital tools and resources, including educational software, online platforms, multimedia resources, and communication tools. The course will focus on practical applications of these tools to enhance student engagement, facilitate personalized learning, and promote digital literacy. Through hands-on activities and interactive discussions, participants will learn how to select, implement, and evaluate digital tools that align with learning objectives and cater to diverse learning styles. Additionally, the course will cover best practices for leveraging digital resources to create inclusive and accessible learning environments.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. exhibit basic digital skills.
CLO 2. navigate through various learning management systems and online platforms.
CLO 3. incorporate OER and multimedia elements in teaching.
CLO 4. select appropriate digital tools through evaluation.

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X			
PLO 2	X	X		X
PLO 3			X	
PLO 4		X	X	X
PLO 5			X	
PLO 6	X	X	X	X

c. Course Content:

Unit 1: Overview of digital tools and resources used in education

a. Introduction to digital tools and resources used in education, the historical development of educational technology.
b. Different categories of educational technology tools, and advantages of incorporating digital tools in education.
c. Practical orientation of basic digital skills to step into the world of apps and tools for digital education.

Unit 2: Introduction to Learning Management Systems, Online Platforms, and Educational Software

a. Concept and purpose of Learning Management Systems, online platforms, and Educational Software, Popular LMS platforms and their features.

b. An overview of online platforms for teaching and learning and strategies to deliver content on LMS.

c. Creation of one free Moodle/ELMS website.

Unit 3: Exploring digital content, multimedia resources, and open educational resources (OER)

a. Digital content, multimedia resources, and open educational resources (OER).
b. Tools and techniques for content development, incorporating multimedia elements and OER in teaching.
c. Overview of lesson plans and resources to tailor instructions and creation of one sample lesson plan layout only.

Unit 4: Evaluating and selecting appropriate digital tools and resources for different educational contexts

a. Identifying educational goals and objectives to assess the specific needs of learners and educators, key factors for evaluating digital tools and resources,
b. Strategies for successful implementation of these tools in different educational contexts.
c. Evaluating and selecting appropriate digital tools and resources for different educational contexts. Creating at least one rubric for assessment.

d. Suggested readings:

[1] https://www.researchgate.net/publication/370924094_Digital_tools_in_education
[2] https://unesdoc.unesco.org/ark:/48223/pf0000215804
[3] https://www.researchgate.net/publication/360523611_An_Overview_of_Digital_Education_in_India
[4] https://www.researchgate.net/publication/371562067_Educational_Platforms_Digital_Tools_for_the_teaching-learning_process_in_Education
[5] https://opentextbooks.clemson.edu/sts1010fidlerfall2021/chapter/digital-learning-resources-in-education/
[6] Lindberg, S., Strong, J., Lefeber, J., Gould, K., & Hodgett, J. (2018, May 15). Digital Tool Selection Checklist and Evaluation Rubric. OER Commons. Retrieved April 19, 2024, from https://wlresources.dpi.wi.gov/authoring/450-digital-tool-selection-checklist-and-evaluation-ru.

Pedagogical Approaches for ICT Integration

Course Code :	**DICTE 103**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 04**

a. Course Description

The course covers the overview of major pedagogical frameworks for ICT integration, the principles, strategies, challenges, and future directions for the integration of ICT in education. The second part comprises designing learner-centred and technology-enabled lessons. The third part comprises differentiated instructions with ICT to address diverse learning needs. The fourth part comprises promoting collaborative learning and communication using ICT tools The course covers theoretical approaches that empower teachers with the knowledge and skills required for integrating technology into their teaching practices. The course also addresses various approaches to ICT integration in the curriculum, with an emphasis on integrating ICT skills in a respective subject. Overall, the course aims to deepen ICT integration through multilevel Technological Pedagogical Content Knowledge design. It provides a comprehensive understanding of pedagogical frameworks for ICT integration, designing learner-centred and technology-enabled lessons, differentiating instruction with ICT to address diverse learning needs, and promoting collaborative learning and communication using ICT tools.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. explain pedagogical frameworks for ICT integration
CLO 2. design learner-centred and technology-enhanced lessons
CLO 3. investigate aspects of social justice and equity as they relate to teaching, schooling, and education
CLO 4. integrate ICT in the classroom by using deliberate planning and collaboration

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X			
PLO 2		X		X
PLO 3	X	X	X	
PLO 4		X		X
PLO 5			X	
PLO 6	X	X	X	X

c. Course Content:

Unit 1: Understanding pedagogical frameworks for ICT integration

a. Major Technology Integration Framework: Justifying that content, pedagogy, and technology are essential intertwining areas needed to achieve technologically enhanced learning.
b. Principles and strategies for integrating ICTs into the curriculum.

c. Challenges, and future directions of integrating ICT into teaching and learning practices

Unit 2: Designing learner-centred and technology-enabled lessons

a. Theories of knowing and learning as they relate to digital media. Pedagogical approaches to using ICT in such a way that it supports the attainment of curriculum objectives.
b. Concept and key principles, the shift from teacher-centred to learner-centred approaches, benefits of Learner-Centred Instruction, examples of technology-enhanced Learner-Centred Environments.
c. Generic model, which consists of three fundamental elements: pedagogy, social interaction, and technology. Lesson plans and integrated curriculum unit. Create one lesson plan.

Unit 3: Differentiated instructions with ICT to address diverse learning needs

a. Use ICT to address diverse learning needs.
b. Aspects of social justice and equity as they relate to teaching, schooling, and education.
c. Differentiated instructions and their use, draw at least one differentiated instructional model

Unit 4: Promoting collaborative learning and communication using ICT tools

a. Approaches to ICT integration in the curriculum, including complex problem-solving.
b. Concept and benefits of Collaborative Learning in Education, designing effective collaborative learning activity.
c. ICT tools for collaboration and communication skills used in diverse needs. Create one blog or Google Doc for collaboration.

d. Suggested readings:

[1] Teachers' ICT in pedagogy: A case for mentoring and mirrored practice | Education and Information Technologies (springer.com) https://link.springer.com/article/10.1007/s10639-024-12603-4
[2] Integration of ICTs in teaching practices: propositions to the SAMR model | Educational technology research and development (springer.com) https://link.springer.com/article/10.1007/s11423-022-10169-x
[3] Technology-Enhanced Learning: A Learning Sciences Perspective | SpringerLink https://link.springer.com/referenceworkentry/10.1007/978-3-319-17461-7_56
[4] A systematic literature review of ICT integration in secondary education: what works, what does not, and what next? | Discover Education (springer.com) https://link.springer.com/article/10.1007/s44217-023-00070-x
[5] Teachers' ICT in pedagogy: A case for mentoring and mirrored practice | Education and Information Technologies (springer.com) https://link.springer.com/article/10.1007/s10639-024-12603-4

Digital Leadership, Citizenship and Online Safety

Course Code :	**DICTE 104**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 04**

a. Course Description:

The course shall be covered by completing the Commonwealth Digital Education Leadership Training in Action (C-DELTA) Course.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. understand digital education as the process of fostering people's ability to live, learn and work in an evolving digitally mediated society by
- mobilising resources,
- developing digital identities and
- engaging with networks.

PLO/CLO	CLO 1
PLO 1	X
PLO 2	
PLO 3	X
PLO 4	
PLO 5	
PLO 6	X

c. Course Content:

The learning modules of C-DELTA have been developed by the University of Cape Town (UCT) with support from the Commonwealth of Learning (COL). UCT is South Africa's oldest university and is one of Africa's leading teaching and research institutions. The course contents are hosted at COL's Moodle learning management system and are made available through the C-DELTA platform to the users. The course contents can also be accessed through COL's institutional repository.

C-delta (col.org)

d. Suggested readings:

[1] https://cdelta.col.org/ReadMore

[2] http://oasis.col.org/handle/11599/2809

Assessment and Evaluation in ICT-Enabled Learning

Course Code :	**DICTE 105**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 04**

a. Course Description:

The course is designed to provide educators with the knowledge and skills necessary to effectively assess and evaluate student learning in technology-enhanced educational environments. Participants will explore a variety of assessment strategies, tools, and methodologies specifically tailored to the integration of ICT in teaching and learning. Throughout the course, participants will delve into topics such as formative and summative assessment in ICT-enabled learning, authentic assessment methods using digital tools, leveraging learning management systems for assessment, and the ethical considerations of assessment in a digital context. Emphasis will be placed on understanding how to align assessments with learning objectives, differentiate assessments to accommodate diverse learners, and utilize data-driven insights to inform instructional decision-making. Through case studies, hands-on activities, and collaborative discussions, participants will gain practical experience in designing and implementing effective assessments within ICT-enabled learning environments. Additionally, the course will cover best practices for providing constructive feedback to students using digital platforms and tools. By the conclusion of the course, participants will have developed a comprehensive understanding of assessment and evaluation practices in the context of ICT-enabled learning and will be equipped with the skills to design and implement meaningful assessments that leverage technology to support student learning and growth.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. design assessments aligned with ICT-integrated learning outcomes
CLO 2. develop rubrics for assessment
CLO 3. evaluate tools used for e-assessments
CLO 4. analyse their own ICT competencies

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X			
PLO 2		X		
PLO 3			X	
PLO 4				X
PLO 5				
PLO 6	X	X	X	X

c. Course Content:

This course is divided into four units, each focusing on a different aspect of assessment and evaluation in ICT-enabled learning.

Unit 1: Designing assessments aligned with ICT-integrated learning outcomes

a. Best practices for designing assessments that align with ICT-integrated learning outcomes.
b. ICT tools and resources in the course design and planning process, selecting appropriate software and hardware,
c. Designing online learning activities and creating multimedia content incorporating COL's Course Learnability Checklist.

Unit 2: Using Digital Assessment Tools and Platforms

a. Different digital assessment tools and platforms available for use in ICT-enabled learning.
b. Types of digital assessment tools and their implementation. Create at least one digital assessment.
c. Aligning assessments with the learning outcomes of the course and designing assessments that measure the specific ICT-integrated skills and knowledge that students are expected to acquire.

Unit 3: Analysing and interpreting assessment data for instructional improvement

a. Techniques to analyse and interpret assessment data to improve instruction in ICT-enabled learning.
b. Practical orientation on learning analytics to evaluate the alignment between course learning objectives and assessment activities and identify areas where the assessments may need to be revised to better align with the learning outcomes.
c. Assessments based on ICT competencies that require students to use ICT tools and resources to solve real-world problems.

Unit 4: Addressing challenges and considerations in assessing ICT-based learning

a. Challenges and considerations that arise when assessing ICT-based learning.
b. Using ICT to create student-centred learning environments that promote active learning and engagement.
c. Designing assessments that allow students to demonstrate their learning in a variety of ways, such as through multimedia presentations or online discussions and fostering ICT competencies.

d. Suggested Readings

[1] https://files.eric.ed.gov/fulltext/EJ1056082.pdf

[2] https://files.eric.ed.gov/fulltext/ED496228.pdf

[3] https://journals.sagepub.com/doi/full/10.1177/2042753019899732

[4] https://www.sciencedirect.com/science/article/abs/pii/S0360131522001749

[5] https://www.researchgate.net/publication/38183763_Aligning_ICT_in_assessment_with_teaching_and_learning_enhancing_student_achievement_in_the_middle_years

[6] https://www.frontiersin.org/articles/10.3389/fpsyg.2022.758016

SEMESTER-II

E-Learning Design and Development

Course Code :	**DICTE 201**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 04**

a. Course Description:

This comprehensive course is aimed at equipping instructional designers and educators with the knowledge and skills required to create effective and engaging e-learning experiences. Participants will explore the principles of instructional design, multimedia development, and technology integration to design and develop high-quality e-learning content. Throughout the course, participants will delve into topics such as learning theories, needs assessment, instructional strategies, multimedia production, interactive design, and user experience considerations specific to e-learning. Emphasis will be placed on understanding how to create learner-centred e-learning experiences that promote active engagement, knowledge retention, and meaningful learning outcomes. Through hands-on projects, case studies, and collaborative discussions, participants will gain practical experience in applying instructional design models and developing interactive e-learning modules. Additionally, the course will cover best practices for incorporating multimedia elements, interactive assessments, and accessibility features to ensure inclusivity and effectiveness in e-learning environments. By the conclusion of the course, participants will have developed a comprehensive understanding of e-learning design and development principles and will be equipped with the skills to create impactful e-learning content that aligns with learning objectives and engages learners effectively.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. understand e-learning design and illustrate instructional design models.
CLO 2. create engaging and effective e-learning content.
CLO 3. incorporate multimedia elements and interactive activities into courses.
CLO 4. multimedia and interactive elements are accessible on different devices, such as smartphones and tablets.

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X			
PLO 2		X		
PLO 3			X	
PLO 4				X
PLO 5				
PLO 6	X	X	X	X

c. Course Content:

Unit 1. Principles of e-learning Design and Instructional Design Models

a. Overview of e-learning design, its principles, its benefits, and its importance in the current digital age, conducting research and analysing the target audience.
b. Storyboarding, principles and applications of instructional design, including the analysis, design, evaluation, and implementation of instruction.
c. Using learning management systems and emergent technologies

Unit 2. Creating interactive and engaging e-learning content

a. Graphic design principles (contrast, similarity, proximity, alignment, symmetry, and repetition) for creating engaging and effective e-learning courses,
b. Writing effective script treatments, prototyping, and authoring content,
c. Methods and techniques used for evaluating and assessing the effectiveness of e-learning courses

Unit 3. Incorporating multimedia elements and interactive activities

a. Selecting multimedia to illustrate, explain, or reinforce content.
b. Using multimedia to illustrate, explain, or reinforce content.
c. Incorporate interactive elements into courses.

Unit 4. User experience design and accessibility considerations

a. Key principles of user experience design
b. Common accessibility barriers that people with disabilities face when using digital products
c. Designing digital products that are accessible to people with disabilities

d. Suggested Readings:

[1] https://www.yukonlearning.com/Syllabi/Essentials_of_E-Learning_Design_Online_Syllabus.pdf

[2] https://www.yukonlearning.com/Syllabi/Essentials_of_e-Learning_Design_Training_Syllabus.pdf

[3] https://elearningindustry.com/16-essential-steps-elearning-course-design

[4] https://cpage.sfsu.edu/elearning

[5] https://www.udemy.com/course/instructional-design-for-elearning/

[6] https://www.ispringsolutions.com/blog/online-course-design

[7] https://openpress.usask.ca/universaldesignforlearning/chapter/applying-udl-principles-to-course-design/

Professional Development for ICT Integration

Course Code	**: DICTE 202**	**Total Marks**	**: 100**
Course Type	**: Compulsory**	**Credits**	**: 04**

a. Course Description:

The course is designed to provide educators and instructional leaders with the knowledge, skills, and strategies necessary to effectively integrate ICT into teaching and learning practices. Participants will explore a range of topics related to the seamless integration of ICT tools and resources in educational settings, with a focus on enhancing pedagogy, student engagement, and learning outcomes. Throughout the course, participants will delve into key areas such as identifying appropriate ICT tools for diverse learning needs, designing technology-enhanced lesson plans, fostering digital citizenship and online safety, leveraging educational software and platforms, and promoting collaborative and innovative learning experiences through ICT integration. Emphasis will be placed on understanding how to align ICT integration with curriculum standards and educational goals, as well as how to address potential challenges and barriers to successful implementation. Through interactive workshops, practical demonstrations, and collaborative discussions, participants will gain hands-on experience in integrating ICT tools and resources into their teaching practices. Additionally, the course will cover best practices for professional growth in the digital age, including strategies for ongoing professional learning, reflective practice, and the ethical use of technology in education. By the conclusion of the course, participants will have developed a comprehensive understanding of effective ICT integration in educational settings and will be equipped with the skills to confidently and purposefully integrate technology to enhance teaching and learning experiences.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. describe teachers' professional development in ICT integration
CLO 2. explore collaborative learning and communities of practice
CLO 3. conduct training programmes and generate certificates and badges
CLO 4. reflect upon innovative practice and continuous improvement in ICT integration

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X			
PLO 2		X		
PLO 3			X	
PLO 4				X
PLO 5				
PLO 6	X	X	X	X

c. Course Content:

Unit 1. Strategies for teachers' professional development in ICT integration

a. Concept of professional development in ICT integration
b. Importance of professional development in ICT integration.
c. Strategies for effective professional development in ICT integration, perform personal SWOT analysis

Unit 2. Collaborative learning and communities of practice

a. Concept of collaborative learning and communities of practice
b. Importance of collaborative learning and communities of practice in ICT integration
c. Strategies for implementing collaborative learning and communities of practice in ICT integration, share personal SWOT analysis with peers for feedback.

Unit 3. Teacher training programmes and certifications for ICT in education

a. Overview of Teacher Training Programs and Certifications for ICT in Education
b. Importance of teacher training programs and certifications for ICT in education.
c. Strategies for selecting and participating in effective teacher training programs and certifications for ICT in education, complete one micro-credential course and any skill and share certificate.

Unit 4. Reflective practice and continuous improvement in ICT integration

a. Reflective practice and continuous improvement in ICT integration
b. Importance of reflective practice and continuous improvement in ICT integration
c. Strategies for implementing reflective practice and continuous improvement in ICT integration

d. Suggested Readings:

1] http://bulletin.du.edu/graduate/coursedescriptions/ict/ict.pdf

[2] https://nces.ed.gov/pubs2003/tech_schools/chapter6.asp

[3] https://files.eric.ed.gov/fulltext/ED496228.pdf

[4] https://edu.google.com/intl/ALL_us/get-started/professional-development/

[5] https://www.coursera.org/learn/ict-primary-education

[6] https://www.differentiatedteaching.com/free-online-professional-development/

Experiential Learning in Emerging Trends and Future Directions in Education

Course Code	**: DICTE 203**	**Total Marks**	**: 100**
Course Type	**: Compulsory**	**Credits**	**: 04**

a. Course Description:

This course offers a hands-on, experiential approach to understanding and implementing emerging trends and future directions in education. Through a blend of theoretical discussions, practical activities, and immersive experiences, learners will delve into the concepts of emerging technologies, the impact of digital transformation on education, current trends and research in ICT integration, and the utilization of social media in the teaching-learning process. Emphasis is placed on active participation, critical reflection, and practical application of learned concepts in educational settings.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. Describe the concept of emerging technologies in education and their practical applications for enhancing learning experiences.

CLO 2. Analyse the impact of digital transformation on education through practical examples and case studies.

CLO 3. Evaluate current trends and research in ICT integration in education through hands-on exploration and experimentation.

CLO 4. Explore the practical use of social media in the teaching-learning process, including designing and implementing social media-based activities.

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4
PLO 1	X			
PLO 2		X		
PLO 3			X	
PLO 4				X
PLO 5				
PLO 6	X	X	X	X

c. Course Structure (4 Credits):

Unit 1. Introduction to Emerging Trends and Future Directions in Education (2 Theoretical Hours)

a. Overview of the course and introduction to emerging technologies in education
b. Understanding the practical implications of digital transformation, including AI, AR, and VR applications in education
c. Exploring future directions in education and hands-on activities to envision the use of emerging technologies in educational settings

Unit 2. Impact of digital transformation on education (1 Theoretical Hour)

a. Definition, historical context, and practical importance of digital transformation in education
b. Hands-on exploration of flipped classrooms, blended learning, gamification, and educational apps through case studies and simulations
c. Addressing practical challenges and ethical considerations in the digital education landscape, with real-world examples

Unit 3. Current Trends and Research in ICT in Education (1 Theoretical Hour)

a. Overview of current trends and research in ICT integration in education
b. Practical evaluation of the impact of ICT on teaching and learning through interactive demonstrations and experimentation
c. Hands-on exploration of best practices for integrating ICT tools in educational contexts, including collaborative activities and peer feedback

Unit 4. Social Media in the Teaching-Learning Process (1 Practical Hour)

a. Introduction to practical applications of social media in education
b. Hands-on exploration of current trends and research in social media integration through interactive workshops and group projects
c. Designing and implementing practical applications of social media tools in educational scenarios, with peer collaboration and feedback

d. Suggested Readings:

[1] https://cptc.libguides.com/TLC/Evidence-Based-Teaching-Practices

[2] https://journals.sagepub.com/doi/10.1177/875687051002900303

[3] https://journals.sagepub.com/doi/10.1177/8756870599018003-402?icid=int.sj-abstract.citing-articles.34

[4] https://status.restek.wwu.edu/14017/c/file/visit?PDF=jsce-2014-syllabus.pdf

[5] https://link.springer.com/article/10.1007/s10212-023-00734-0

[6] https://www.e-education.psu.edu/geog885/syllabus

Project Work

Course Code :	**DICTE 204**	**Total Marks**	**: 100**
Course Type :	**Compulsory**	**Credits**	**: 08**

a. Course Description:

Overall, this course will provide candidates with the skills and knowledge necessary to create a successful blended learning course using the MOODLE LMS platform. By the end of the course, candidates will have completed a project that they can use in their teaching practice which shall be evaluated through a blind review.

b. Course Learning Outcomes:

After completing this course, the learners will be able to:

CLO 1. create a video lecture.
CLO 2. incorporate Open Educational Resources as reading/downloadable material and convert OER into H5P interactive content.
CLO 3. create an online discussion forum and integrate assessment.
CLO 4. create a blended learning course in their area of expertise.
CLO 5. design Pre-/In-Service Teachers' training programmes on integrating ICT with teaching, learning and assessment.

PLO/CLO	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5
PLO 1	X				
PLO 2		X			
PLO 3			X		
PLO 4				X	
PLO 5					X
PLO 6	X	X	X	X	X

c. Course Content:

The candidates will do a project on the MOODLE LMS platform and create a blended learning course in their area of expertise. They will complete the project by 1) Creating a Video Lecture 2) Incorporate Open Educational Resources as reading/downloadable material 3) converting OER into H5P interactive content, 4) creating an online discussion forum and 4) Integrate Assessment.

i. The candidate will create a video lecture on a topic related to their area of expertise. The lecture should be engaging and informative and should be no longer than 20 minutes.

ii. Candidates will incorporate open educational resources (OERs) as reading or downloadable material for their course and convert OER into H5P interactive content. OERs can include articles, videos, podcasts, or any other relevant material that is available for free online.

iii. Candidates will create online discussion forums where students can discuss the course material and ask questions. The forum should be moderated by the candidate, and they should encourage active participation from students.

iv. Candidates will integrate assessment into their course, which can include quizzes, assignments, or other forms of evaluation. The assessment should be designed to test the students' understanding of the course material and should be aligned with the learning objectives.

d. Suggested Readings:

[1] https://youtube.com/watch?v=8leIc8toIVE

[2] https://moodle.org/mod/forum/discuss.php?d=11396

[3] https://www.openlms.net/blog/products/using-moodlejoule-hybrid-delivery/

[4] https://elearningindustry.com/directory/software-categories/learning-management-systems/features/blended-learning

[5] https://moodle.com/news/blended-learning-moodle-empower-3500-international-learners/

[6] https://www.researchgate.net/publication/343508054_Designing_Lesson_Plans_for _Adaptive_Learning_Using_Moodle_ LMS_Platform