

**ST. XAVIER'S COLLEGE OF EDUCATION  
(AUTONOMOUS)**

[Re-accredited (3<sup>rd</sup> Cycle) at 'A' Grade by NAAC with CGPA: 3.67]

Palayamkottai, Tirunelveli District - 627 002, Tamil Nadu, India



**DIPLOMA PROGRAMME IN  
DIGITAL PEDAGOGY**



**2022-2023**

S. No.

Content

Pg. No.

**Digital Pedagogy**

**Semester I**

1. Course I : Basics of Computer System
2. Course II : ICT Integrated Pedagogy

**Semester II**

3. Course III : Digi-Content in Teaching-Learning
4. Course IV : Project Work

## **Diploma Programme in Digital Pedagogy**

We are living in a world of micro-electronics and computers are used in all domains of life. This digital era makes our every work comfortable and Comprehensive. Information and Communication Technologies (ICT) has to be integrated in every subject and component of institutional activities. Integration of ICT with pedagogy improves the efficiency, effectiveness and quality of teaching and learning process in a significant way. It offers powerful opportunities for pupils to explore the ideas, to generalize, explain results, analyze situations, to receive fast and reliable information and feedback. This new diploma programme aims to help the teacher education degree holders/pupils to be aware of the different possibilities offered by the components of ICT and to use ICT in order to enhance the teaching-learning process in the near future. Hence the employability skills of the new graduates are empowered.

### **Programme Learning Outcomes**

#### **The prospective teacher**

1. becomes a techno-savvy teacher
2. utilizes the ICT tools in teaching-learning process
3. understands
  - a) The fundamentals of computers and its applications
  - b) ICT Integrated Pedagogy
  - c) Digi-content in Teaching-Learning
4. acquires the skill to prepare
  - a) E-content, E-Module and Short Learning Object (SLO)
  - b) Digital Presentations with Voice over and Animations
  - c) An educational website
5. develops the Techno-pedagogical skills

#### **Eligibility**

This is an Add on Diploma Programme to all the First Year B.Ed students. The medium of instruction and examination shall be in English.

#### **Duration: 1 Year**

The duration of the programme shall be one year from June/July of every academic year in two semesters. The total number of days of the programme will be 150 working days.

Examinations shall be held at the end of Semester I and II on such dates as may be decided by the College. The course work will be 150 hours.

### Course of Study

The course of study for the programme Diploma in Digital Pedagogy is segmented as follows

Sem	Course Code	Course	Marks	
			Internal	External
I	BACDP1	Basics of Computer System	30	70
	BACDP2	ICT Integrated Pedagogy	30	70
II	BACDP3	Digi-content in Teaching-Learning	30	70
	BACDP4	Project Work		
		i. Record/Document/Script	25	
		ii. Practical Outputs		50
		iii. Viva-voce		25
<b>Total</b>			<b>115</b>	<b>285</b>

\* *The Practical Outputs will be*

A) *An Educational Website*

B) *An E-Content/E-Module/Short Learning Object (SLO)*

### To Consolidate

<b>Part A</b>	<b>Theory</b>	BACDP1, BACDP2 and BACDP3
<b>Part B</b>	<b>Project Work</b>	BACDP4

## **Course I: Basics of Computer System**

**B.Ed.: Sem. I**

**Sub. Code: BACDP1**

### **Course Learning Outcomes:**

#### **The Prospective Teacher**

1. develops the fundamental knowledge about computers
2. acquires the knowledge on communication and networks
3. understands the concept of operating system, types and functions
4. practices fundamental computer operations
4. familiarizes on the application softwares of Computers

#### **Unit I: Computer Basics**

History of a computer, Generations of a Computer, Components of a Computer: Input and Output Devices, Primary Storage Devices, Secondary Storage Devices - Booting of a Computer - Types of memory

#### **Unit II: System Related Logics and Networks**

Connecting devices to computers - Expansion slots, adapter boards, I/O ports - (SCSI) Problem analysis: Flow Charts, Algorithms, Decision tables - Software programming tools: Translators, Compiler, Interpreter, Assembler - Number System (Decimal, Binary, Octal, Hexadecimal, 1's Complement and 2's Complement), Representing Characters in Memory, Types of Networks and Trouble Shooting

#### **Unit III: Basics of Operating System**

Introduction to Operating System: Meaning of Operating System - Types of Software's - its functions, Types of Operating System: Single user and Multi-user - Key features of the Operating System - Prominent Operating System (DOS, Windows, Unix, Linux, iOS, and Android) - File System in Operating Systems, Basic Internal / External Commands of DOS

#### **Unit IV: Basics of Windows**

Introduction to Windows 10: Parts of Window Screen (Desktop, Window, Icons), Start Menu, Task Bar Settings, Application and Document Window, Anatomy of a Window (Title Bar, Minimize Maximize Buttons, Control Box, Scroll Bars, Scroll Buttons, Scroll Boxes). User Accounts, Window Explorer (Expansion, Collapsing of a Directory Tree, Copying, Moving, Deleting Files, Folder, Creating Folders), about Desktop Icons (Recycle Bin, My Computer, Network neighborhood, Briefcase), Folder, shortcut creation, Setting of Screen Saver, Colour Setting, Wall Paper, Changing Window appearance and DOS Prompt

## **Unit V: Basics of Application Softwares**

Educational uses of Application Software: Word Processors, Presentation, Spread sheet, Database Management, Viruses and its Management - Facilities available for communication: E-mail, Chat, Online conferencing (Audio-video), e-library, Websites, Blog, Wiki and Social networking - Concept and uses: Internet forum, News groups and Search Engines - Legal and Ethical issues: Copyright, Hacking, Netiquettes and Net-safety

### **Practicum (any two)**

1. Construct a time line on the generation of computers.
2. Create a poster on the computer components over years.
3. Critically analyse the features of the Operating Systems Windows and Unix.
4. Write a reflective report on the features of WINDOWS 10.
5. Develop a digital presentation on any one of the topics of your own.

### **References:**

1. Starkey, L. (2012). *Teaching and learning in the digital age*. Routledge.
2. Taneja, V. & Parashar, S. (2011). *Electronic - Education* (1<sup>st</sup>ed.). Alfa Publications.
3. Chitrasen. (2006). *Role of Computer & Internet in Modern Education* (1<sup>st</sup> ed.). Alfa Publications.
4. Arulsamy, S., & Sivakumar, P. (n.d.). *Application of ICT in Education* (1<sup>st</sup> ed.). Neelkamal Publications.
5. Sinha, R. (2013). *Information Technology Applications in Education* (1<sup>st</sup>ed.). Anmol Publications.
6. Simmons, C., & Hawkins, C. (2009). *Teaching ICT* (1<sup>st</sup>ed.). SAGE Publications.
7. Das, M. K. (2012). *E - Learning* (1<sup>st</sup>ed.). Pearl Books.
8. Vanaja, M., Rajasekar, S. & Arulsamy, S. (2014). *Information Communication Technology (ICT) in Education* (1<sup>st</sup>ed.). Neelkamal Publications Pvt. Ltd.
9. John Milin Sandeep. (2015). *Innovations in Teaching of Computer Science* (1<sup>st</sup> ed.). Neelkamal Publications Pvt. Ltd.
10. Pooja Sharma & Shivangi Nigam. (2014). *ICT Mediated Education* (1<sup>st</sup> ed.). R. Lall Book Depot.
11. Shah, K.N. (2018). *Online Teaching: Tools and Projects* (1<sup>st</sup> ed.). Pearl Books.

## **Course II: ICT Integrated Pedagogy**

**B.Ed.: Sem. I**

**Sub. Code: BACDP2**

### **Course Learning Outcomes:**

#### **The Prospective Teacher**

1. understands the fundamental concept of computer education
2. analyzes the role of ICT in education and teacher education
3. understands the computer aided teaching and learning strategies
4. develops techno-based lesson plan
5. acquires the concept of multimedia approach

#### **Unit I: Basics of Computer Education**

Computer Education - Concept, Need and Importance, Application of Computer with Special Reference to Education and Society. Aims and Objectives of Computer Education, Present and Future of Computer Education in Indian Schools. Computer Education Curriculum - Concepts and Principles of Curriculum for Computer Education

#### **Unit II: Information and Communication Technology in Education**

Information and communication technology: Meaning, importance and nature - Need of information and communication technology in education - Scope of ICT in education: Teaching - learning process, publication, evaluation, research and administration - Paradigm shift in education due to ICT: Curriculum, methods of teaching, classroom environment, evaluation procedure and educational management - Challenges in integrating information and communication technology in school education

#### **Unit III: Computer Aided Teaching and Learning**

Computer Assisted Teaching (CAL) - Project Based Teaching (PBL) - Collaborative Learning - Technology Aided Learning - E-learning - Web Based Teaching - Virtual Classroom - Flipped Classroom - e-Tutoring and e-content: Content Analysis - Script Writing

#### **Unit IV: Planning of Computer Assisted Instruction**

Lesson planning - Need for and importance of lesson plans, steps of lesson plan, characteristics of a good lesson plan, Innovations in Teaching Technology. Individualized Instruction: Meaning, Characteristics and scope, Computer-Assisted Instructions, Personalized System of Instruction, Learner Controlled instruction, Use of Computer in School Education, System Approach

## **Unit V: Basics of Multimedia Components**

Multimedia Approach in Teaching - Computer as Teaching Machine - Education Use of Internet - Building Blocks of Multimedia (Text, Hypertext, Digital Audio Video Animation) - Methods of Teaching CAI, CML & Online Education - Planning of ICT Laboratory: Room Space, Furniture, Lighting Conditions, Number of Computers, LCD, Interactive White Boards

### **Practicum (any two)**

1. Write a reflective report on the Integration of ICTs in the School Curriculum.
2. Compare any two online learning platforms and critically analyse it.
3. Develop an ICT Integrated lesson Plan on a topic.
4. Create a Digital Programmed Learning Material for your Subject.
5. Critically analyse the ideal structure of a digital or ICT Laboratory.

### **References**

1. Arulsamy, S. & Sivakumar, P. (n.d.). *Application of ICT in Education* (1<sup>st</sup> ed.). Neelkamal Publications.
2. Sinha, R. (2013). *Information Technology Applications in Education* (1<sup>st</sup> ed.). Anmol Publications.
3. Simmons, C. & Hawkins, C. (2009). *Teaching ICT* (1<sup>st</sup> ed.). SAGE Publications.
4. Das, M. K. (2012). *E - Learning* (1<sup>st</sup> ed.). Pearl Books.
5. Vanaja, M., Rajasekar, S. & Arulsamy, S. (2014). *Information Communication Technology (ICT) in Education* (1<sup>st</sup> ed.). Neelkamal Publications Pvt. Ltd.
6. John Milin Sandeep. (2015). *Innovations in Teaching of Computer Science* (1<sup>st</sup> ed.). Neelkamal Publications Pvt. Ltd.
7. Pooja Sharma & Shivangi Nigam. (2014). *ICT Mediated Education* (1<sup>st</sup> ed.). R. Lall Book Depot.
8. Shah, K.N. (2018). *Online Teaching: Tools and Projects* (1<sup>st</sup> ed.). Pearl Books.
9. James A.O. Brien (1997). *Introduction to Information Systems*, New York: McGraw Hill,
10. Dennis, P. Curtin et.al., (1999). *Information Technology - The Breaking Wave*. New Delhi: Tata McGraw Hill Publishing Co. Pvt. Ltd.
11. Rajasekar. S. (2004). *Computer Education and Educational Computing*. New Delhi: Neelkamal Publications Pvt. Ltd.



12. Mujibul Siddiqui. (2004). Technology in Teacher Education. New Delhi: APH Publishing Corporation.
13. Clive Gifford. (1985). Using Computers in Education. London: Interface Publications.
14. Anice James. (2005). Teaching of Mathematics. Neelkamal Publications Pvt. Ltd.

## **Course III: Digi-Content in Teaching-Learning**

**B.Ed.: Sem. II**

**Sub. Code: BACDP3**

### **Course Learning Outcomes:**

#### **The Prospective Teacher**

1. understands the fundamentals of Google Sites
2. acquires the fundamental knowledge of web designing
3. develops the skill of web design using the tools
4. utilizes the E-content Strategies
5. prepares Video Content

#### **Unit I: Basics of Google Site**

Internet as source of learning - Blogs -Web Page Designing - Google Sites: Basics - Adding shared borders to the page - Giving title -Selecting a background - Adding text - Hyperlink - turning text your heading - Adding picture - Adding a clipart - Adding navigation Bar - Publishing Web page - Making the web page searchable

#### **Unit II: Introduction to Microsoft Expression Web**

HTML Front Page: Introduction to Microsoft Expression Web (MEW) and Notepad++: MEW Window, various toolbar of MEW - Creating a web page using wizard - Creating a web page using templates and toolbars

#### **Unit III: HTML and Its tags**

HTML Basics - Elements - Attributes - Headings - Paragraphs - Styles - Formatting - Quotations - Comments - Colors - Links - Images - Tables - Lists - Block and Inline - Forms - Media's - API's

#### **Unit IV: Preparation of E-Content**

E-Content Design - Content Authoring Tools - Documentation& Presentation Tools - Graphics & Animation Tools - Audio and Podcasting - Learning management Software's

#### **Unit V: Preparation of Videos with Open Sources**

Online Videos - Creation of YouTube Channel - Online Video Creation - Video Editing Software's - Ethical Clearance of Content - Copy Right Issues

## References

1. Alfred Brock. (1985). *Personal Computer for Education*. London: Harper and Row Publishers.
2. Ambrans and Hooper, K. (1990). *Interactive Multimedia*. Redmandwa: Microsoft Press,
3. Clive Gifford. (1985). *Using Computers in Education*. London: Interface Publications.
4. Starkey, L. (2012). *Teaching and learning in the digital age*. Routledge.
5. Taneja, V. & Parashar, S. (2011). *Electronic - Education* (1<sup>st</sup> ed.). Alfa Publications.
6. Chitrasen. (2006). *Role of Computer & Internet in Modern Education* (1<sup>st</sup> ed.). Alfa Publications.
7. Arulsamy, S. & Sivakumar, P. (n.d.). *Application of ICT in Education* (1<sup>st</sup> ed.). Neelkamal Publications.
8. Sinha, R. (2013). *Information Technology Applications in Education* (1<sup>st</sup> ed.). Anmol Publications.
9. Simmons, C. & Hawkins, C. (2009). *Teaching ICT* (1<sup>st</sup> ed.). SAGE Publications.
10. Das, M.K. (2012). *E - Learning* (1<sup>st</sup>ed.). Pearl Books.
11. Starkey, L. (2012). *Teaching and learning in the digital age*. Routledge.
12. Taneja, V. & Parashar, S. (2011). *Electronic - Education* (1<sup>st</sup> ed.). Alfa Publications.
13. Chitrasen. (2006). *Role of Computer & Internet in Modern Education* (1<sup>st</sup> ed.). Alfa Publications.
14. Arulsamy, S. & Sivakumar, P. (n.d.). *Application of ICT in Education* (1<sup>st</sup> ed.). Neelkamal Publications.
15. Sinha, R. (2013). *Information Technology Applications in Education* (1<sup>st</sup> ed.). Anmol Publications.
16. Shah, K.N. (2018). *Online Teaching: Tools and Projects* (1<sup>st</sup> ed.). Pearl Books.

## Course IV: Project Work

**B.Ed.: Sem. II**

**Sub. Code: BACDP4**

### **Guidelines for the Practical Outputs**

#### **(A) An Educational Website**

- a) The candidate has to prepare an educational website on his own under the guidance of the staff-in-charge.
- b) The Website may have curriculum vitae of the individual, academic information and other relevant study materials namely, lesson plan, Programmed Learning Materials and digital presentations.
- c) The website may have at least four menu components in which he/she may have at least two submenus in each.
- d) The Content of the Website must be free from Plagiarism.
- e) The Staff-in-charge has to approve the website, before it is launched.
- f) The links of the respective websites may be given as links in the Official College Website which are to be submitted to the Controller of Examinations of SXCE.

#### **(B) Short Learning Object (SLO)/ E-Module**

- a) The content analysis must be done properly prior to the SLO preparation.
- b) The content must be free from Plagiarism.
- d) The SLO must have clear content verbally and visually.
- e) The total duration of the SLO may be 7 minutes maximum.
- f) The SLO must contain the virtual appearance of the candidate for at least 2 minutes.
- g) The launched SLOs need to be uploaded in the College YouTube Channel and the link for the same should be linked with the College Website.