EDU 481L Technological Pedagogical Content Knowledge

					L	T	P	C
Max. Marks : 100								
(CA: 40 + ESA: 60)					0	0	6	3

Learning Outcomes:

Student Teacher will be able to

- interpret concept and potential of ICT.
- interpret concept of Technological Pedagogical Content Knowledge.
- integrate ICT in different types of classroom environment.
- apply ICT for Teaching Learning Process.
- reflect their skills in the creation of documents.
- apply Social Networking & Game-based Learning in Teaching Learning Process.
- construct question paper with the help of ICT.

Course Outline:

Course name: Technology Pedagogical Content Knowledge Unit-I: The ICT: Meaning and Potential

a) Computer system, Hardware, Software
b) The meaning of IT and ICT
c) Potential and need of ICT for Teacher
d) concept of Technological Pedagogical Content Knowledge

Unit-II: Teaching with Technology

a) ICT for Formal Teaching
b) ICT for Collaborative Learning
c) ICT for constructivist Classrooms

Unit-III: Computer-mediated Communication

a) Formatting of Documents- Notices/ Brochure / Letters / Address label
b) Formatting of table - School time - table, Exam Time table
c) Maintaining - Fee record, Attendance record, formative evaluation record

Unit-IV: Student presentations& ICTs for Teaching-Learning

a) Developing multimedia presentation
   - Image Processing
   - Using Video and Hyperlink with presentation
   - Creating Animation for teaching
b) Social Networking and Learning
c) Concept of Game-based Learning

Unit-V: Technology and Assessment

a) Formatting a Question Paper
b) Preparing result sheet: Class wise, student wise
c) Graphical representation of Results

Practicum:

- Developing a Plan and sample digital content to teach a Unit in pedagogy subject for secondary classes with the support of ICT.
- Develop a brochure to organize any interschool competition.
- Draw a Time table for Secondary School using MS office.
- Prepare a resultsheet of atleast 25 students including grade.

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- CD ROM. (2005). *Intel Teach to the Future' programme (I.T.F.P.).*
- Sinha, P.K. and Priti Sinha. (2005). *Computer Fundamentals– Concept, System and Application.*

Web Resources:

- Potential and Need of ICT:
  https://www.ripublication.com/ijeis16/ijeisv6n1_01.pdf
- ICT for collaborative Learning:
  https://files.eric.ed.gov/fulltext/EJ1131495.pdf
- ICT for Constructivist Classrooms: https://grdspublishing.
  org/index.php/people/article/view/217/2203
- **Computer-mediated Communication**: https://books.google.
  co.in/books?id=I6Fgje2Cg8C&printsec=frontcover&dq=books+for+
  microsoft+word&hl=en&sa=X&ved=0ahUKEwj5p_eHmM_gAhUE
  EnIKHQafBCsQ6AEIKDAA#v=onepage&q=books%20for%20micr osoft%20word&f=false
- Social Networking and Learninghttps://www.researchgate.net/publication/329317151_Social
  _Networks_as_a_Learning_and_Teaching_Environment_and_Securi ty_in_Social_Networks
- Concept of Game-based Learninghttps://www.collegestar.org/modules/game-based-learning
- **Technology and Assessment**:
  https://books.google.co.in/books?id=qKVCAwAAQBAJ&printsec=frontco
  ver&dq=books+for+microsoft+word+excel+power+point&hl=en&sa=X&v
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EDU 201 21st Century Skills for Teachers

	L	T	P	C
Max. Marks : 100				
(CA: 40 + ESA: 60)	**4**	**0**	**0**	**4**

Learning Outcomes:

On successful completion of the course, students will be able to:-

- to analyze the need of 21st Century Skills.
- to appraise the concept, characteristics and elements of CriticalThinking and Collaborative Problem Solving Skills.
- to appraise the role of teacher in promoting Critical Thinking andCollaborative Problem Solving Skillsin students .
- to design the best suited activities for developing Critical Thinkingand Collaborative Problem Solving Skills.
- to apply the process of Critical Thinking and CollaborativeProblem Solving Skills to activities.
- to be able to assess the performance of students in CriticalThinking and Collaborative Problem Solving Skills.
- to develop assessment tasks for 21st Century Skills (likes: CriticalThinking and Collaborative Problem Solving).

Course Content

Unit I : 21st Century Skills

- 21st Century Skills: Concept & Need
- Classification of21st Century Skills
  - o Learning Skills (Critical Thinking, Creativity and Innovation, Collaboration, Communication
  - o Literacy Skills (Information literacy, Technology literacy &Media Literacy)
  - o Life Skills (Leadership, adaptability, flexibility, responsibility,Self-direction, social and cross cultural interaction)

Activity : Presentation and Discussion on different 21st Century Skills

Unit II : Critical Thinking Skills

- Critical thinking-Concept and Elements
- Process of Critical Thinking
- Role of a Teacher to promote Critical Thinking Skills
- Strategies to develop Critical Thinking Skills

Activity : Group Discussion on role of teacher to promote Critical Thinkingskills

Unit III : Collaborative Problem-Solving Skills

- Collaborative Problem Solving Skills –Conceptand Elements
- Process ofCollaborative Problem Solving Skills
- Role of a Teacher to promote Collaborative Problem-SolvingSkills
- Methods and Tools to develop Collaborative Problem-SolvingSkills

Activity : Collaborative and interdisciplinary problem-solving activitiesbased on community / field work

Unit IV:Critical Thinking Skills &Collaborative Problem-SolvingSkills based Activities

- Understanding challenging biases
- Assuming the Worst Case Scenario
- Decision making games
- Team building puzzle
- Work together on problems

Activity :Design the best suited activities for developing 21st Century Skillsin students

Unit V: Assessment of 21st Century skills through AuthenticLearning Tasks (Group tasks)

- Reflecting and Documenting Achievements
- Lesson designing(Analyze different points of view and interpretand synthesize new information)
- Working with Research data (Group Task)

Activity : Interdisciplinary Problem-solving group projects aimed atInnovative and Entrepreneurial solutions

Practicum (Any two):

- One thematic term paper
- Design and Presentation of any one activity based on 21st

Century Skills

- Lesson designing(Analyze different points of view and interpretand synthesize new information)

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21st Century Skills

- http://cbseacademic.nic.in/web_material/Manuals/21st_Century_Skill_Handbook.pdf
- https://www.aeseducation.com/blog/what-are-21st-century-skills
- https://www.researchgate.net/publication/336148206_Introduction_to_21st_century_skills_and_education/link/5fbdfadf92851c9 33f57cf18/download
- https://www.oecd.org/site/educeri21st/40756908.pdf
- https://www.hzu.edu.in/uploads/2020/9/21st%20Century%20Skills%20Development%20Through%20Inquiry-Based%20 Learning_%20From%20Theory%20to%20Practice.pdf

Critical Thinking Skills

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- https://edtechreview.in/trends-insights/insights/2581-critical- thinking-activities-exercises
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- https://www.designorate.com/steps-effective-critical-thinking/
- http://training.hr.ufl.edu/resources/LeadershipToolkit/job_aids/Sys tematicProcessforCriticalThinking.pdf
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- https://telrp.springeropen.com/articles/10.1186/s41039-019-0119-y
- https://unremot.com/blog/problem-solving-activities/
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- https://wabisabilearning.com/blogs/critical-thinking/10-great- critical-thinking-activities-that-engage-your-students
- https://unremot.com/blog/problem-solving-activities/
- https://www.outbackteambuilding.com/blog/team-building- problem-solving-activities/
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Assessment of 21st Century skills

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- https://thejournal.com/articles/2018/11/01/teaching-21st-century- skills-requires-new-assessments.aspx
- https://www.acer.org/au/discover/article/teaching-and-assessing- 21st-century-skills
- https://www.nciea.org/blog/educational-assessment/instructing- assessing-21st-century-skills

EDU 202 ICT for Teachers

Max. Marks : 100   **L   T   P   C**

(CA: 40 + ESA: 60)   **4   0   0   4**

Learning Outcomes:

On successful completion of the course, students will be able to:

- interpret concept and potential of ICT.
- interpret concept of Technological Pedagogical Content Knowledge.
- integrate ICT in different types of classroom environment.
- apply ICT for Teaching Learning Process.
- reflect their skills in the creation of documents.
- apply Social Networking & Game-based Learning in TeachingLearning Process.
- construct question paper with the help of ICT.

Unit-I: The ICT: Meaning and Potential

a) Computer system, Hardware, Software
b) The meaning of IT and ICT
c) Potential and need of ICT for Teacher
d) concept of Technological Pedagogical Content Knowledge

Unit-II: Teaching with Technology

a) ICT for Formal Teaching
b) ICT for Collaborative Learning
c) ICT for constructivist Classrooms
d) Ethics and copyright issues in using ICT

Unit-III: Computer-mediated Communication

a) Introduction of word processor
b) Creating & Formatting of Documents- Notices/ Brochure / Letters
   / Address label
c) Formatting of table - School time - table, Exam Time table
d) Maintaining - Fee record, Attendance record, formativeevaluation record

Unit-IV: Student presentations& ICTs for Teaching-Learning

a) Presentation Skills: Introduction and Importance in TeachingLearning Process
b) Developing multimedia presentation
  - Image Processing
  - Using Video and Hyperlink with presentation
  - Creating Animation for teaching
b) Social Networking and Learning
c) Concept of Game-based Learning

Unit-V: Technology and Assessment

a) Spreadsheet softwares: Introduction and use
b) Formatting a Question Paper
b) Preparing result sheet: Class wise, student wise
c) Graphical representation of Results

Practicum:

- Developing a Plan and sample digital content to teach a Unit inpedagogy subject for secondary classes with the support of ICT.
- Develop a brochure to organize any interschool competition.
- Draw a Timetable for Secondary School using MS office.
- Prepare a result sheet of at least 25 students including grade.

Reference:

- CD ROM. (2005). *Intel Teach to the Future' programme (I.T.F.P.).*
- Sinha, P.K. and Priti Sinha. (2005). *Computer Fundamentals–Concept, System and Application.*

Web Resources:

- Potential and Need of ICT:
  https://www.ripublication.com/ijeis16/ijeisv6n1_01.pdf
- ICT for collaborative Learning:
  https://files.eric.ed.gov/fulltext/EJ1131495.pdf
- ICT for Constructivist Classrooms: https://grdspublishing.
  org/index.php/people/article/view/217/2203
- Ehics and Copyright Issues in Using ICT:
  https://sites.google.com/site/ignouhelpbooks95/Block-
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- Ehics and Copyright Issues in Using ICT:
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- Computer-mediated Communication: https://books.google.co.in/
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- Technology and Assessment:
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  xcel%20power%20point&f=false

EDU 422L 21st Century Learning Skills

		L	T		P	C
Max. Marks : 100						
(CA: 40 + ESA: 60)		0	0		6	3

Learning Outcomes:

Student teacher will be able -

- to analyze the need of 21st Century Learning Skills.
- to appraise the concept, characteristics and elements of Critical Thinking and Collaborative Problem Solving Skills.
- to appraise the role of teacher in promoting Critical Thinking and Collaborative Problem Solving Skillsin students .
- to design the best suited activities for developing Critical Thinking and Collaborative Problem Solving Skills.
- to apply the process of Critical Thinking and Collaborative Problem Solving Skillsto activities.
- to be able to assess the performance of students in Critical Thinking and Collaborative Problem Solving Skills.
- to develop assessment tasks for 21st Century Learning Skills (likes: Critical Thinking and Collaborative Problem Solving).
  Course Content

Unit I : 21st Century Learning Skills

- 21st Century Skills: Concept & Need
- Classification of21st CenturyLearning Skills :
    o Critical Thinking
    o Creativity and Innovation
    o Collaborative Problem-Solving
    o Communication

Unit II : Critical Thinking &Collaborative Problem-Solving Skills

- Critical thinking-Concept and Elements
- Collaborative Problem Solving Skills –Conceptand Elements
- Role of a Teacher to promote Critical Thinking Skills&Collaborative Problem-Solving Skills

Unit III:Critical Thinking Skills based Activities(Any two)

- Expressing in multiple mediums
- Understanding challenging biases
- Assuming the Worst Case Scenario

Unit IV: Collaborative Problem-Solving Skills based Activities (Any two)

- Decision making games
- Team building puzzle
- Work together on problems

Unit V: Assessment of 21st Century skills through Authentic Learning Tasks (Group tasks)

- Reflecting and Documenting Achievements
- Lesson designing(Analyze different points of view and interpret and synthesize new information)
- Working with Research data (Group Task)

References

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Co-funded by the
Erasmus+ Programme
of the European Union

EDU 529 Assessment for 21st Century Skills

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Student will be able to:

- Describe the concept of Assessment for 21st Century Skills
- Discuss the Need of assessing 21st Century Skills
- Analyse the Impact of optimizing Assessment for development of 21st Century Skills
- Differentiate and apply different types of assessments and techniques for 21st Century Skills
- Understand Dimensions of Assessment for 21st Century Skills in educational settings
- Prepare Documents of assessment for 21st Century Skills

Unit 1: Optimizing Assessment for 21st Century Skills

- Concept of Assessment for 21st Century Skills
- Need of assessing 21st Century Skills
- Impact of optimizing Assessment for development of 21st Century Skills

Unit 2:Types of assessment for 21st Century Skills

- Types of assessment for 21st Century Skills
  - Assessment of cognitive abilities (e.g., mathematics, multiple-choice tests) and
  - Assessment of non-cognitive characteristics (e.g., personality type)

Unit 3:Techniques for assessing 21st Century Skills

- Techniques for assessing 21st Century Skills
  - (structured interviews, - situational judgment tests, role plays, group exercises, in-basket exercises, work samples, and performance standards/appraisal)

Unit 4: Dimensions of Assessment for 21st Century Skills in educational settings

- Criteria for the Assessment of 21st Century Skills
- Role of Teacher
- Challenges

Unit 5: Documentation of assessment of 21st Century Skills

- Data (student assessment) Collection
- Data (student assessment) analysis and Interpretation
- Reporting of data for Documentation of assessment of 21st Century Skills

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