SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)
(Established under section 3 of the UGC Act, 1956)
Re-accredited by NAAC with 'A++' Grade | Awarded Category – I by UGC
Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

Course Name: Certificate Program in Critical Thinking Skills and Collaborative Problem-Solving Skills
Course Code: T1729
Faculty: Law
Course Credit: 10
Course Level: 4
Sub-Committee (Specialization): Transnational and Global Legal
Learning Objectives:

1.to understand the concept and elements of inquiry2.to appraise the concept, characteristics and elements of critical thinking3.to apply the process of critical thinking skills to activities4.to analyze and evaluate strategies relating to critical thinking skills5.to enable the participants to create methods and tools for critical thinking skills6.to appraise the role of teacher in promoting critical thinking skills in students 7.to design the best suited activities for developing critical thinking skills in students 8.to be able to assess the performance of students in critical thinking skills by providing the rubrics and measure the outcome 9.to appraise the concepts relating to the skill of understanding transdisciplinary problem10.to discuss the concept, characteristics and elements of collaborative problem-solving skills in learning how to learn11.to apply the methods and tools for collaborative problem-solving 12.to appraise the role of teacher in promoting collaborative problem-solving skills in students with ethical compliance13.to design the best suited activities for developing collaborative problem-solving skills in students for promoting innovation and entrepreneurship on actual problem 14.to enable the teacher to assess the performance of students in collaborative problem-solving skills and measure their progress15.to equip the teacher with the knowledge of Digital Intelligence Quotient DQ

Books Recommended:

Book	Author	Publisher
From Digital Literacy to Digital IntelligenceA Comparative Study of Digital Literacy Frameworks, by Taufiqur Rahman,Ayu Amalia, Zuhdan Aziz,	Advances in Social Science, Education and Humanities Research, volume 518Proceedings of the 4th International Conference on Sustainable Innovation 2020 Social,Humanity, and Education ICoSIHESS 2020	
Global Leadership Competence: The Intelligence Quotient of a Modern Leader. Kerri Heath, L. Martin, Linda Shahisaman. 2017.	The Journal of Leadership Education.	
How can we teach kids critical thinking skills	Peter Ellerton	Available at https://phys.org/news/2020-01-kids-critical-skills.html
Is critical thinking a better model of intelligence In R. J. Sternberg Ed., The nature of human intelligence p. 183:196.	Halpern, D. F., Butler, H	Cambridge University Press. 2018.
Forget IQ. Digital intelligence will be what matters in the future,	Claudio Cocorocchia,	World Economic Forum, 2018. Available at https://www.weforum.org/agenda/2018/02/digital-intelligence-internet-safety-future/

The DQ Institute -A Brief Overview, 2020.	Shama Patel,	Available at https://medium.com/human-digital-intelligence/the-dq-institute-a-brief-overview-9d9817982f3e
The Need For Digital Intelligence, Outlook- Science And Technology Education, 2018.	Dalmeet Singh Chawla	Available At Https://Media.Nature.Com/Original/Magazine-Assets/D41586-018-06848-6/D41586-018-06848-6.Pdf

Course Outline:

Sr. No.	Topic	Actual Teaching Hours	Contact Hours Equivalence
1	**21st Century Skills** 1.3 21st Century Themes Global Awareness, Economic, Business, Financial and Entrepreneurial Literacy, Civic literacy, Environmental literacy, Health literacy, 1.1 Concept and Development of 21st Century Skills.1.2 Classification of 21st Century Skills Learning Skills Critical Thinking, Creativity and Innovation, Collaboration, Communication Literacy Skills Information literacy, Technology literacy Media Literacy Life Skills Leadership, adaptability, flexibility, responsibility, Self-direction, social and cross cultural interaction, Concept of Soft skills, concept of empathy, Linkages of 21st Century Skills to soft skills and empathy 1.4 Intelligence Quotient, Emotional Quotient and Digital Intelligence Quotient 1.4.1 Intelligence Quotient -The eight types of intelligence are defined as:verbal/linguisticlogical/mathematicalvisual/spatialmusical/rhythmic bodily/kinestheticinterpersonalintrapersonalnaturalistic.1.4.2 Emotional Quotient-Self-awarenessSelf-managementSocial awarenessRelationship management1.4.3 Digital Quotient-Digital Citizenship Digital CreativityDigital Competitiveness	**13.5**	**13.5**
2	**Critical Thinking -Concept, Characteristics and Elements** 1.Concepts of Critical thinkingBeliefsTruthcertaintyPowerJustificationInterpretationValuesexplanationPerspectiveEvidence CultureResponsibilityObjectivity2.Characteristics of Critical ThinkingAsking the Question and Defining the issueDefining a problemExamining evidences data, facts, observations, experiencesAnalyzing Assumptions BiasesAvoiding emotional reasoning, oversimplificationConsidering other interpretationsTolerating AmbiguityReferences21st Teach Skills HandbookEmpathy by Simon Sinek Approx 14 minutes video athttps://youtu.be/IJyNoJCAuzAMindfulness of Buddha3.Elements of Critical ThinkingReflectionAnalysisAcquisition of informationcreativityStructuring argumentsdecision making,CommitmentDebate 1. Concept of Inquiry and its elementMeaning and concept of InquiryElements of InquiryCareful and systematic observations to gather data Conduct experiment where required to supplement observationsReport without interpretations or judgmentAnalyze patternsUsing inductive and deductive reasoningDetermine the causal factors of the generalizationsDiscuss the generalizations with a known theory or formulate a new theoryGeneralizations based on evolving patternExplore and EvaluateAssumptions and biasesLogical conclusionsClaims with evidence and argumentsIndian Philosophy 2 hours Vatsyayanas Model of Enquiry into truth addresses following 4 aspects to arrive at the truthKnowerKnowableProcess of knowingKnowledgeIndian Philosophy Process of KnowingoDirect Process: Perception e.g. eye witnessIndirect Process: Inference, Language Interpretation of Language: Purva Mimansa	**30**	**30**
3	**Role of a Teacher to promote Critical Thinking Skills**	**17.5**	**17.5**

	1.encourage creativity - like art project, aesthetic value-based creativity, brainstorming while giving students opportunity to think classify, categorizing, comparing, contrasting, making connections group discussions on relevant topic in class that promotes peace and understanding to encourage to respect people with difference2.Give freedom to learn and ask questions3.Encourage project-based learning4.Encourage collaboration with different schools, different grade students, other subject teachers, even schools and students outside the country5.Include professional development skills, e.g. research work presentation and content6.Encourage students to look at an issue from different perspectives to form unbiased opinion7.Create arguments in discussions		
4	**Process of Critical Thinking** Research Perspective1.Identifying Central claim2.Deriving justification based on logical reasoning3.Considerations not mentioned but may be important for evaluating the central claim4.Decision to accept/reject/hold on the central claimAction based perspective1. Knowledge2. Comprehension3. Application4. Analyze5. Synthesis6. Take Action	**15**	**15**
5	**Strategies to develop Critical Thinking Skills** 1.Listen to others perspectives2.being a continuous learner3.making right decisions4.develop argumentative analysis5.Group/Team work6.develop social skills7.Self-reflection8.Self-management9.researching10.think locally to impact globally11.creative problem solving/thinking CPS12.Indian Philosophy - Construction of a system of knowledge 45 min-1 hourList of items Definition of a definition Scrutiny of the definition	**16**	**16**
6	**Methods and Tools to develop Critical Thinking Skills** 1.Brainstorming open ended questions2.problem solving, while developing compassion3.Educational Field trips4.interactive games5.ideal examples to be creative 6.Role plays depicting ethical reasoning7.evaluating cultural differences to generate aesthetic values8.Games - Taboo cards, outdoor games to teach concepts e.g.to develop leadership skills and think critically	**14**	**14**
7	**Assessment of Critical Thinking Skills** 1.Rubrics for assessment of critical thinking skillsAccurately and thoroughly interprets evidence, statements, graphics, questions, literary elements, etc.Asks relevant questions.Analyses and evaluates Fair-mindedly examines beliefs, assumptions, and opinions and weighs them against facts.Draws insightful, reasonable conclusions.Justifies inferences and opinions.Thoughtfully addresses and evaluates major alternative points of view.Thoroughly explains assumptions and reasons.Measuring the outcome of students learning of critical thinking skills	**3.5**	**3.5**
8	**Suggested Activities for Critical Thinking Skills** Activities can be the same as tools mentioned above in Unit V. However, additional activities could be:1.Impromptu debates-Socratic method and Akanksha method Indian aspect 15min-30 min2.Create out of the syllabus questions3.Ask riddles, Play Taboo cards4.Project based learning. E.g. trade unions on strike - solve the issue by understanding the reason for the strike and suggest solutions.; democracy or physical and chemical change5.Phenomena based learning - study real world issues e.g. what strategies should Boeing undertake to gain its market share, after the crashes reputation at stake6.Skill of Understanding transdisciplinary approach to a problem in critical thinking	**7**	**7**
9	**Collaborative Problem-Solving Skills -Concept, Characteristics and Elements**	**8**	**8**

	1.Concept and characteristics of Collaborative Problem-solving skills - necessary requirement for the programme, which happens systematically and regularly at all levels, overview of students learning experiences, cognitive thinking incorporates different learning styles, drama, dance, rapping, student work and learning inculcate learning attributesProblem solving, team work/collaborationare soft skills2.Elements of Collaborative Problem-Solving Skills Strategies meeting time managed systematically and effectively involving all teachers, vertical planning to ensure continuity and progression horizontal planning for a collaborative approach to plan teaching strategiestime management is a soft skill3.Empowering teachers to use their creativity and professional development. creativity is a soft skill		
10	**Methods and Tools to develop Collaborative Problem-Solving Skills** The following components are linked to soft skills, emotional intelligence, mindfulness, empathy and life skills:1.disciplinary and interdisciplinary understanding to develop indigenous knowledge2.service learning to synthesize 21st century challenges 3.develop international mindset4.integration of technology to build computational skills for virtual learning5.develop social and communication skills to facilitate cognition establishing and maintaining shared understanding from local to global establishing and maintaining team organization	**8**	**8**
11	**Role of a Teacher to promote Collaborative Problem-Solving Skills** 1.group discussion to promote consensus 2.openness to develop self-management3.researching and information availability4.promote backward planning5.consensus building6.self-management while negotiating problems7.thinking locally to act globally8.accomplishment: by innovation or research or report	**7**	**7**
12	**Assessing students Collaborative Problem-Solving Skills** 1.classroom and assessment experiences2.out of school home life and hobbies3.technology specific like gaming	**3.5**	**3.5**
13	**Suggested Activities for Collaborative Problem-Solving Skills** 1.jigsaw problems to ensure interdependence among problem solvers2.Dance, drama, song, portfolio3.Collaborative and interdisciplinary problem-solving activities based on community / field work4.Interdisciplinary Problem-solving group projects aimed at Innovative and Entrepreneurial solutions5.Online collaboration and problem-solving skills6.Skill of Understanding transdisciplinary problem in collaborative Problem-Solving Skills7.Developing Course Specific Modules for individual disciplines during practical sessions	**7**	**7**
	Total	**150**	**150**

Pre Requisites:

Education related to Pre-service teachers, in-service teachers, bachelor students and masters students

Evaluation:

Assignment
Presentation
Project
Quiz
Seminar
Viva
Exercise
Class test
Examination
case studies
Group Discussion

Pedagogy:

Lecturefield workproblem solving activitiesgames

Expert:

Dr Shashikala Gurpur,Dean FoL SIU, Director SLS Pune,Symbiosis Law School Pune, SIU

I hereby certify that the syllabus has gone through the accreditation process and has been added to the course catalogue of SIU.

Shashikala

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SLS, PUNE

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