



Universidad Juárez del Estado de Durango
Facultad de Ciencias Forestales



Learning Unit Programme
With an integral professional competences approach

I. LEARNING UNIT GENERAL DATA

1. learning Unit Name			2. Code		
Critical and Creative Thinking Skills			6796		
3. Academic Unit					
FORESTRY SCIENCES FACULTY					
4. Academic programme			5. Level		
Environmental Management Engineering			bachelor's degree		
6. Training Area					
Basic					
7. Academy					
Academy of Basic and Methodological Sciences					
8. Modality					
Mandatory	X	Course	X	Attendance	
Elective		Course-workshop		Non-attendance	X
		Workshop		Mixed	
		Seminar			
		Laboratory, field practice, etc.			
		Professional Practice			
		Academic Stay			
9. Pre-requirements					
Pass the CENEVAL exam / pass the Semester Zero (previous semester)					

10. Theory hours	Practice hours	Independent study hours	Total hours	Credits
6	0	0	6	6
11. Names of the teachers who participated in the development and/or modification of the programme				
Psic. Ana Alejandra Ontiveros Gutiérrez/Dra. Leticia Pesqueira Leal/Lic. Dora Isela Espino Vázquez				
12. Date of development	Date of modification		Date of approval	
August 2008	December 2011 October 6th 2017		January 2013 October 12th 2017	

II. LEARNING UNIT SPECIFIC DATA	
13. Presentation	
It is important to support the first-semester students so that they know different learning strategies that will be useful throughout their professional training. These strategies will allow them to build their learning significantly through the reading processes, reasoning, critical understanding, memory, problem solving, creativity, oral and written argumentation, at the same time, you will be able to order and develop your thinking by activating your basic cognitive processes (attention, analogy, classification, inference, motivation). The module emphasizes the need for the students to develop their ability to learn autonomously and that this allows them to access the courses of the curriculum through a gradual approach to their professional field.	
14. Integral professional competences to develop in the student	
Generic competences	Instrumental 18 Capability for analysis and synthesis 19 Capability for oral and written communication 21 Capability for information management 22 Problem solving 23 Decision making Personal 24 Teamwork 25 Ethical commitment and quality Systemic 26 Motivation for quality 27 Ability to apply theoretical knowledge in practice

	28 Ability to communicate with non-experts in the field			
Professional competences	Disciplines Basic general knowledge of environmental engineering o Ability to deal with multidisciplinary environmental problems or Management of Geographic Information Systems Management of statistical programs Professionals (know-how) Design and application of sustainability indicators Preparation, management, monitoring and control of environmental projects Identification and valuation of environmental costs Design and execution of environmental education and communication programs			
General purpose of the course	This subject proposes to develop skills in students that allow the use of critical thinking as an intercultural competence that allows understanding reality through activities of linking at different levels of social organization: individual, Family, university and community. The units of which it is composed are aimed at ensuring that young people recognize the existence of different types of knowledge and develop skills for critical thinking, based on metacognition as a condition of critical thinking for the understanding of the world from the everyday life of the subject.			
15. Joint of axes				
Transversal, the use of cognitive and metacognitive strategies is promoted, through the competences approach, which allows the student to understand and integrate the basic concepts for the development of thinking skills (theoretical axis), transference and transversally of the basic, analytical and creative thinking skills to their inter and transcultural environment, through analysis, reflection, self-evaluation, individual and group metacognition (heuristic axis) in a framework of openness, respect, self-criticism and autonomy (axiological axis).				
16. development of the course				
Module 1	Basic Concepts			
Intended learning	Learning contents	Learning product(s)	Strategies	Teaching resources and materials

The basic concepts of intelligence will be explained, determined in a personal way their intellectual coefficient, where they can question and self-question their experiences applying the best way that they can learn more easily about a topic that interests them, through different methods of thinking skills basic and creative, constantly	Topic 1.0	Virtual platform	Management of the Moodle platform, providing the spaces in order to identify the works in, forums, online tasks and questionnaires	- Virtual classroom - Essential management (Moodle Platform) - Internet connection
	Topic 1.1 Basic Concepts Topic 1.2 History of the study of intelligence	✓ What is intelligence ✓ Video about intelligence ✓ Calculate your IQ	That the student will carry out an exercise of reinforcement, in which he / she is interested in the subject, exploring a world of knowledge through experiences or customs A game will be processed through an essay which must contain at least one anecdote of his life in which he realized that the intelligence increased and why, using photographs and images of interest	Computer centre Virtual classroom - Necessary management (Moodle Platform) - Lectures of support - Tasks - Videos - Forums - Questionnaires - Internet connection - Audio and video files - Internet information - Computer equipment and peripherals
	Topic 1.3 Brain hemispheres	✓ History of the study of intelligence ✓ The most intelligent men in History ✓ Consume fatty acids	the functionality of the mind is put into practice Solving a problem which is the way in which we realize that we think about a solution and therefore we	

			apply intelligence, applying the knowledge learned	
	Topic 1.4 Thinking skills	✓ Ability to think ✓ Levels of information processing ✓ Pyramid of thought	will start to research on "Mozart Effect" and comment on the forum (free)	
Module 2	Basic process			
Intended learning	Learning contents	Learning product(s)	Strategies	Teaching resources and materials
Use of techniques for the identification of central ideas, continuing with the reading, synthesis and individual and group interpretation through the participation of forums, apply what has been learned in the recommended exercises, perform logical analysis techniques, - Put into practice the use of techniques for Identification of central ideas	Topic 2.1 Basic Thoughts Process 01	Exercise	In this process we will put into practice the ability of observance and similarity since it is the first step in the thought process, observing correctly assures you the understanding of all the factors	Computer centre - Virtual classroom - Essential management (Moodle Platform) - Readings of support - Tasks - Videos - Forums - Questionnaires - Internet connection - Audio and video files Internet information - Computer equipment and peripherals
	Topic 2.2 Basic processes 02	Exercise 2 Critical thinking	Through the support material are given to the task of reading, reason and make a comparison between two things and relate them in order to	

Socializing with knowledge, experiences and evidence of transfer of learning			exercise and practice in everyday life the way of practical learning to each individual	
	Topic 2.3 Basic Process 03	Exercise how to propose a hypothesis? Entertainment: Optical illusions	The student will work on how to propose a hypothesis using the methods that are most practical and can develop in the most natural way, in order to apply them in their professional training	
Module 3	Critical thinking			
Intended learning	Learning contents	Learning product(s)	Strategies	Teaching resources and materials
Structure according to the rules of the organizer in questions, relevance, metacognition, creativity, congruence, style, spelling and development in Word, Power Point or in any other applicable	Topic 3.1 Critical thinking	✓ Critical Thinking ✓ Scheme of critical analysis	The student will use the analysis of the approaches of his or her thoughts, applying a critique or observation about the support materials that are implemented in order to have the courage to confront, criticize feedback.	•Computer centre • Virtual classroom •Essential management (Moodle Platform) • Readings of support • Tasks • Videos • Forums • Questionnaires

program.	Topic 3.2 Creative thinking	✓ Creativity ✓ Test of creativity	The student will apply his creativity through his elements and support material, elaborating a story with drawings and coherent dialogues in different stories	• Internet connection • Audio and video files • Internet information • Computer equipment and peripherals
	Topic 3.3 Intelligence and emotions	✓ Intelligence and emotions ✓ Intelligence and emotions Test ✓ Emotional ecology ✓ Entertainment: We are mutants	They will investigate what are the positive and emotions, shaped in a generic way by means of reinforcement works within the forum	

17. Performance assessment:

Performance evidence(s)	Performance criteria	Application scopes	percentage
In the course: 1.-Works in Word of the material available in platform. 2.- Online work (Moodle platform of the UJED) 3.- Printing of the different published research. 4.- Examinations of	Works elaborated with the requested characteristics - Congruence in work - Quality in its presentation - Temporary work delivery	Institutional	Formative evaluation 50% Summative evaluation 20% Self-evaluation 10% Co-evaluation 10% Heteroevaluation 10%

knowledge and skills developed in the course. 5.-Evaluations and surveys.			
18. Evaluation criteria:			
Criterion	Value		
Formative Evaluation	50% Responsibility, commitment, tolerance, ethics, values 10% The student values their performance, compares it with the established and determines what objectives met Successfully 10% Students value their peers and apply the values of respect, tolerance and honesty 10% Students value the work of the teacher and the teacher in turn values the students		
Summative evaluation	20% The development and presentation of the products.		
Criteria summation	100% (The criteria implemented in subjects of virtual modality, are different from what is present		
19. accreditation			
In accordance with university regulations, in order to be accredited, the following is required: 1) The minimum score of 6 (six). 2) Show evidences of the evaluation process that implies being evaluated in the Moodle platform of the UJED. 3) To exempt, the student must obtain a minimum grade of 8.5 (eight point five) or higher as a final average, considering the partial evaluations			
20. Information sources			
Basic	- Longoria / Cantú / Ruiz. (2000). Creative thinking. Autonomous University of Nuevo León, Col. Est.: Trillas. - Marcela E. Hinojosa Mora and Luis Fernando Reyes Terán. (2010). Creative Thinking Teacher's Book. Mexico: Trillas. - Charur, Zarzar Carlos. (2014). Basic Thinking Skills. Mexico City Editorial Group Patria - López, M. (2000), Critical Thinking [Paraphrase]. In critical thinking and creativity in the classroom (pp.51-52). Mexico: Trillas - Morales, M. (2016). "Critical thinking for problem solving". Mexico: Universidad Veracruzana.		

Complementary	- Ramos, P. (2011) "The Table of order in thought as a tool for reading Argumentative text", in Ergo, Nueva Época, No. 27, September. Mexico: Universidad Veracruzana. Pp. 15-50. Vega, L. (2015) Introduction to the theory of argumentation: problems and perspectives. Spain: Palestra SUGGESTED INTERNET SITES http://www.psicoactiva.com/tests/testci.htm#inicio http://www.dgb.sep.gob.mx/informacion_academica/actividadesparaescolares/multimedia/manual.html http://www.juegos.com/game/Dreams.html http://www.helios3000.net/tests/eq.shtml#indice
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21. Profile for the teacher who imparts this learning unit

The professor who works as a facilitator of this course in the virtual modality must:

1. Have a Bachelor's, master's and / or doctorate degree
2. Have the corresponding disciplinary training that allows him to perform satisfactorily in this subject.
3. Have the pedagogical and design training in online courses that allows you to properly develop this activity
4. Participate in basic training programs and ongoing training that allows their growth as a content designer for online courses.
5. Participate in research projects related e-learning.

Also have previous experiences in:

1. Design and development of courses in Educational Technologies.
2. Instructional design mediated by technologies.
3. Tutoring for distance students.
4. The evaluation in virtual learning.
5. The use of technological means for teaching and learning.
6. Design and development of teaching and learning strategies
7. Have certification in competences.

