



"El saber de mis hijos  
hará mi grandeza"

## UNIVERSITY OF SONORA

**CENTRAL REGION UNIT**  
**SCHOOL OF ECONOMIC AND ADMINISTRATIVE SCIENCES**  
**DEPARTMENT OF ECONOMY**  
***DEGREE IN BUSINESS AND INTERNATIONAL COMMERCE***

### Identification Data

<b>Subject:</b> Learning to learn strategies	<b>Formative Pillar:</b> Common
<b>Teaching-learning process:</b> Workshop	<b>Pre-requirement:</b> None
<b>Hours per course:</b> Three hours/week/month	<b>Post-requirement:</b>
<b>Nature of subject:</b> Mandatory	<b>Credit Value:</b> 3

### Introduction

According to the General Guidelines of the Curricular Model from the University of Sonora, the purpose of the present formative space corresponds to the Common Formative Pillar is to develop intellectual skills to study through learning cognitive strategies in order to search, acquire, organize, analyze, and use the information and knowledge, and the development of oral and written expression skills, as well as the development of creativity and critical thinking.

Educational investigation within the development field of intellectual abilities has demonstrated that these abilities can be promoted and stimulated throughout three types of processes: a) direct teaching of the mental processes, which implies the practice of diverse independent cognitive practices of curricular content and is expressed in courses that go along with regular ones within the study plan; b) indirect and comprehensive teaching of the curricular content, that is, the mental processes are promoted explicitly in and through didactic design of the subjects or courses within a study plan; finally, c) the teaching of cognitive and meta-cognitive strategies applicable to the different types of academic content of the study plans, under the assumption that the use of cognitive strategies necessarily implies the practice of different mental processes. This last modality is the one that directs this program, with the intention being that the second option is employed in the rest of the subjects within the study plan with the purpose of continuous and cross-sectional reinforcement of the intellectual abilities of the students.

The cognitive and meta-cognitive strategies, also denominated strategies of how learning to learn, have the double function of helping the students to acquire control of their affective or emotional control and to conscientiously improve their learning. These types of strategies incite learning that consists of thinking aids, which could be defined as an association of organized mental processes in sequences that are not plans or procedures aimed at obtaining goals. The students require employing one or more cognitive or meta-cognitive strategies in order to learn and apply materials or information, to actively –mentally- process specific content, either conceptual or procedural. Reiterated and self-reflective practice of this type of

strategies in diverse contexts and educational contents directs to the acquisition of thinking skills.

This subject starts from recognizing the existence of a variety of strategies in order to acquire learning skills. The cognitive strategies proposed for their learning in this type of program are general and applicable in diverse learning contexts and in all environments of knowledge such as philosophy, math, language, and biological and social sciences. The effective application of those at first require of a professor who performs the role of facilitator, in charge of monitoring and feedback the procedures; it is also necessary to have the students develop the disposition of developing the ability to want to develop self-learning skills, reason why it is necessary for the professor to promote motivation.

In this program, the content related to the reading and writing receives a basic level and introductory treatment, while they are considered as a vehicle for the teaching-learning process of cognitive strategies. The aforementioned means to stay outside of the reach of the present course in regards to the development of skills for the preparation of academic projects of a greater demand such as essays, case studies, laboratory reports, information of investigation, etc., as well as the development of specific and appropriate learning skills for the disciplines of the different academic programs; the in-depth study of such aspects will correspond to courses of the other formative aspects.

The contents of the program are made up by procedural type aspects, that is, referred to the intellectual or cognitive skill development and proposes a sequence which attends to the need of promoting in a gradual manner, through proximities, the skills referred to throughout the application and practice of cognitive strategies in situations that range from the simple to the complex. It begins with knowledge about themselves as apprentices, their strengths and limitations in regard to specific contents, in regard to certain types of activities, situations and moments in which learning is facilitated or made difficult. This knowledge about oneself is grouped together under the notion of learning style.

With the purpose of obtaining the compliance of the objectives of the present program and develop in practice teaching-learning processes in an interrelated manner with formative experiences of the other educational spaces of the Common Formative Pillar, the preparation of didactic guides in which the activities, methods, materials, and means which could be employed in a common manner are specified.

### **General Objective**

The student will develop cognitive and meta-cognitive strategies that allow him to adapt to the demands of university level academic work, based on the critical analysis of study materials, whose information can be address in different levels of abstraction. The domain of such strategies will take place through his knowledge, understanding, and constant application.

#### **1. Preparatory cognitive strategies for learning**

##### **Specific objectives:**

Identify the unique learning style; understand what a concept is and what its operations are.

1.1 Identification of the self-taught learning styles

1.2 The concept and its operations (definition, division, and classification)

**2. Reading and literal analysis of information**

**Specific Objectives:**

Understand and apply some basic cognitive strategies in order to read and carry out a literal analysis of information parting from different sources.

2.1 Cognitive strategies for the analysis of information

2.2 Identification of the organization of information structures

2.3 Use and preparation of analytical diagrams

2.4 Use and preparation of conceptual maps

2.5 Analysis of the structure of information

**3. Cognitive and meta-cognitive strategies for the interpretation of information**

**Specific Objectives:**

Understand and apply some cognitive and meta-cognitive strategies in order to interpret information parting from different sources.

3.1 Paraphrase use and preparation

3.2 Inference use and realization

3.3 Inductive and deductive reasoning

3.4 Thematic content and argumentation process

**4. Cognitive and meta-cognitive strategies for the evaluation of information.**

**Specific Objectives:**

Understand and apply some cognitive and meta-cognitive strategies in order to evaluate critical information parting from different sources.

4.1 Analogical reasoning

4.2 Interpretation of metaphors

4.3 Critical analysis of the evaluation of contents in information.

**5. Higher order multi-purpose learning strategies**

**Specific Objectives:**

Understand and apply some cognitive and meta-cognitive strategies in order to develop problem solving, critical thinking, and meta-cognition skills.

5.1. Problem solution

5.2. Critical thinking

5.3 Meta-cognition

### **Didactic Strategies**

The learning of strategies requires many demonstrations with varied content. The teaching model consists of three phases: a) Modeling of the strategy by the professor or facilitator, and as the course advances, the students that dominate the strategy can demonstrate how they are used within determined content; b) Student practice (guided), with such model being less used, that is, little by little reducing the support provided by the professor, also requires strengthening, explaining, providing feedback, and returning to the demonstrations or modeling if needed; c) Student practice (un-guided) with different knowledge areas. The purpose is that the students will be able to use a strategy without being guided and in varied contexts.

For each one of the five units, different activities will be performed and planned allowing learning evaluation:

- Preparation of different texts through paraphrase.
- Perform analytical schemes, diagrams, conceptual maps, etc.
- Preparation of texts expressed by the interpretation of the reader in regard to the contents of the information used.
- Prepare texts which express critical judgments and self-conclusions in regard to the information analyzed.

### **Modalities and evaluation and accreditation requirements**

With the purpose of reaching a complete evaluation of the procedural learning content, the following dimensions will be studied in such a manner that the student reaches an autonomous and self-regulated performance:

- The acquisition of information in regard to the information about the procedure in a sufficient and relevant manner, which means, know what and when to use it as well as knowing what conditions to use it in and what decisions to make. It is the dimension of the corresponding procedural cognitive or meta-cognitive knowledge.
- The application and the degree of comprehension of the steps involved in the procedure. That is, know how to execute it and dominate the actions that make it up. Which refers to the dimension of the use of the procedure that corresponds to a cognitive or meta-cognitive strategy and implies that the students will be able to evaluate their actions upon execution. In turn, it is important, to consider two aspects: a) ability to execute all of the steps on a predetermined order, with a certain ability and precision, and, in some cases, with a certain degree of automation; b) know how to make a general or discriminative use of the procedure.

In regard to the first dimension, the knowledge of the procedure can use the following strategies of evaluation:

- Ask students to name the procedural steps, referred to the rules that govern the procedure or the conditions that need to consider for its execution. This can be carried out in a verbal or written manner, both with supports in procedural maps.

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- Request the students to explain the procedures to others. Allow for evaluation of what was referred to previously.

For the second dimension, know how to execute the procedure, the following evaluative strategies can be used.

- Direct following of the execution of the procedure through its learning in order to reach formative evaluation, providing feedback from the professor.
- Observation and analysis of the products obtained upon applying procedures using previously defined criteria in regard to what has the most interest in evaluating. The evaluation of progress can be carried out through the “evaluation of portfolios or folders”, where, throughout the school cycle, samples are collected of the representative work performed by the students and a qualitative evaluation of their progress and their opportunity areas is performed.
- Request tasks that demand the flexible application of the procedures in new contexts evaluating the degree of generalization and adaptation that was reached (performance evaluation). Here and in the two previous items, self-evaluation, co-evaluation, and mutual evaluation strategies can be used.

### **Bibliography**

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### **Desired Professor Profile**

1. Professional degree and/or degree in a related field, teaching experience in these subjects.
2. Evidence the formation process indicated by the Institution
3. Two-year teaching experience
4. Manage an interdisciplinary approach