

1. Module identification code.	
Name of the institution:	Universidad Autónoma de Nuevo León
Name of the school:	School of Medicine
Name of the degree program:	Clinical Chemistry
Name of the course (learning unit):	Research Seminar I
Total number of class hours-theory and practice:	40
Class hours per week:	2 hours
Independent study:	20
Course modality:	Face-to-face instruction
Module level:	Seventh semester
Core/elective module:	Core
Curriculum area:	ACFP-I
UANL credit points:	2
Create date:	October 10th, 2018
Date of last amendment made:	June 07th, 2023
Person(s) responsible for the design	Dr. Sc. Paula Cordero Pérez, Dr. Sc. Diana Patricia Moreno Peña, Dr. Sc. María de Lourdes Garza Rodríguez, Dr. Sc. Liliana Torres González.

2. Purpose:

The purpose of this unit is to contribute to achieving the graduate profile in knowledge and development of scientific research skills within the field of health sciences by creating academic and research proposals in accordance with global best scientific practices to promote and strengthen collaborative work. Students will also be able to apply critical and proactive thinking when selecting and conducting bibliographic research as a team, maintaining a commitment to and respect for their colleagues' opinions and working styles. This will enable them to achieve the adaptability required in the scientific environment to create better advances of the research to be developed.

Additionally, this unit develops specific competencies by incorporating new analytical methodologies during the research process that enhance the functional, economic, and environmental aspects of laboratory processes to address needs in health areas.

The "Research Seminar I" unit is situated in the seventh semester of the Clinical Chemistry degree program and utilizes competencies acquired in the Learning Units of Biostatistics for sample size calculation, mean, and standard deviation of the variables to be analyzed. It also builds on knowledge from Analytical chemistry, Organic chemistry, Basic microbiology, and Clinical biochemistry, applying skills such as solution preparation, analytical validation, and the diagnosis of key pathogenic microorganisms through biochemical and molecular markers. Furthermore, "Research Seminar I" encourages students to analyze, interpret, and discuss results based on scientific articles, theses, or research projects, providing a foundation for "Research Seminar II" and essential bases for the development of social service and professional practice in the field of health sciences research.

3. Competences of the graduate profile:

General competences to which this module (learning unit) contributes:

Instrumental skills:

7. To develop inter, multi and transdisciplinary academic and professional proposals in accordance with the best global practices to promote and consolidate collaborative work.

Personal and social interaction skills:

9. To maintain an attitude of commitment and respect towards the diversity of social and cultural practices that reaffirm the principle of integration in the local, national and international context in order to promote environments of peaceful coexistence.

Integrative skills:

15. To achieve the adaptability required by the uncertain social and professional environments of our time to create better living conditions.

Specific competences of the graduate profile to which this module (learning unit) contributes:

5. To incorporate new analytical methodology that contributes to the functional, economic and/or environmental improvement of laboratory processes to respond to needs in health areas.

4. Factor to consider for evaluation the learning unitg:

- Parcial exams
- Essays of topics assigned by the profesor
- Oral and written presentation of topics assigned by the profesor
- Daily evidence
- Course integrative project/product

5. Course integrative project/product

Written proposal by the team on the assigned topic of a research project in the area of health sciences that includes everything from the theoretical framework to conclusions.

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FACULTAD DE MEDICINA
PROGRAMA ANALÍTICO

6. References:

Arias Fidias G. *El Proyecto de Investigación, Introducción a la metodología científica*. (2006), Venezuela: EPISTEME, C.A. Recuperado de: <https://ebevidencia.com/wp-content/uploads/2014/12/EL-PROYECTO-DE-INVESTIGACION-C3%93N-6ta-Ed.-FIDIAS-G.-ARIAS.pdf>

Behar Rivero Daniel Salomón. *Introducción a la Metodología de la Investigación*, (2008). Cuba: Shalom. Recuperado de: <http://rdigital.unicv.edu.cv/bitstream/123456789/106/3/Libro%20metodologia%20investigacion%20este.pdf>

Gomez Bastar Sergio. *Metodología de la investigación* (2012) , México: Red Tercer Milenio. Recuperado de: http://www.aliat.org.mx/BibliotecasDigitales/Axiologicas/Metodologia_de_la_investigacion.pdf

Sampieri, Roberto. *Metodología de la investigación*. (2014) Ciudad de México, México. Recuperado de: <http://observatorio.epacartagena.gov.co/wp-content/uploads/2017/08/metodologia-de-la-investigacion-sexta-edicion.compressed.pdf>

Rojas Soriano, Raúl. *El proceso de investigación científica*, (2007) México: Trillas. Recuperado de: <https://raulrojassoriano.com/cuallitlanezi/wp-content/themes/raulrojassoriano/assets/libros/proceso-investigacion-cientifica-5-7-27-03-2014.pdf>

Tamayo y Tamayo, Mario (2009) *El proceso de la investigación científica*, México: Limusa. Recuperado de: <https://es.slideshare.net/sarathrusta/el-proceso-de-investigacion-cientifica-mario-tamayo-y-tamayo1>

Quintana Tejera, Luis (2007) *Métodos y técnicas de investigación 1*, México: McGraw-Hill. Paginas WEB

Archivo de vídeo. Define tu línea de investigación. <https://www.youtube.com/watch?v=TP7J3FW2pRg>