

**PONCE HEALTH SCIENCES UNIVERSITY
CLINICAL PSYCHOLOGY PSY.D. PROGRAM**

SYLLABUS

COURSE TITLE	Principles of Psychoneuroimmunology
CODING	PSY 518
CREDIT HOURS	1 credit
CONTACT HOURS	15
PREREQUISITE	None
PROFESSOR	Job Description. Position: Biological Bases of Behavior
TEACHING ASSISTANT	
OFFICE HOURS	
EMAIL ADDRESS	
SEMESTER	

COURSE DESCRIPTION:

Psychoneuroimmunology emerges as a science and branch of medicine, which attempts to provide a scientific explanation to the issue of mind/body relationships. In this sense, it proposes, studies and explains the existing communication between diverse body systems that are responsible for maintaining the equilibrium that allows for a harmonic and healthy functioning of the human body. Students will explore the area of psychoneuroimmunology through a review of the principal concepts on the topic, of the scientific literature and through the most current areas of research. The effect of stress upon the immune system is examined. Specific psychological and CBT techniques utilized by the field of psychoneuroimmunology to treat patients with stress and immune disorders are introduced as well. HIV is explored as an example of a condition that through psychological intervention the Psychologist can impact the psychoneuroimmunological status of the person treated.

SPECIFIC OBJECTIVES

The student will understand the scientific basis of the mind / body communication and its application to the area of health.

The specific aims include:

1. Define the concepts related to Psychoneuroimmunology.
2. Describe the functions of the Immune System and its relation with the psyches.
3. Understand the effects of stress on the Immune System.
4. Describe relaxation and visualization techniques that can be applied to the area of Health.

COURSE OUTLINE

Unit 1 and 2

Upon term of these units, the student should acquire information about the theoretical bases of the psychoneuroimmunology concept.

Objectives:

- a. Review the concept and evolution of the Psychoneuroimmunology
- b. Know the neuroanatomy and biochemical connections between the Central Nervous System and the Endocrine System.
- c. Identify the main communication pathways among Central Nervous System (CNS), Endocrine System (ES) and Immune System (IS).

Assigned readings:

- Ader R, Felten DL, Cohen N. (Eds): Psychoneuroimmunology.
- Daruma, J. (2004) Introduction to Psychoneuroimmunology.
- Besedovsky, H (1996). Bases científicas de la Psiconeuroinmunología. Interacciones Inmuno-Neuro-Endocrinas.

Suggested readings:

- Irwin, M. (2007) Human psychoneuroimmunology: 20 Years of discovery.
- Boll, T., Bennett, S., Perry, N. & Rozensky, R. (2004). Handbook of Clinical Health Psychology.

Unit 3

Upon complete these units, the student should recognize the impact of psychological variables on the systems CNS, ES and IS.

Objectives:

- a. Acquire knowledge about the concepts of Immunology including the structure and functions of Immune System.
- b. Know the general concepts of physiology and functioning of CNS, glands, and immune cells.
- c. Identify the physiological effects of psychosocial factors and stress on functioning of these systems (CNS, ES and IS).

Assigned readings:

- Ader R, Felten DL, Cohen N. (Eds): Psychoneuroimmunology
- Besedovsky, H. & Sorkin E (1977). Network of immune-neuroendocrine interactions.
- Lazarus, R y Folkman, S (1986). Estrés y Procesos Cognitivos.
- Webster, J. & Glaser, R. (2008). Stress hormones and immune function.

Suggested readings:

- Biondi M. & Zannino LG. (1997). Psychological stress, neuroimmunomodulation, and susceptibility to infectious diseases in animals and man: a review.
- Witek-Janusek, L., Albuquerque, K., Rambo, K., Chroniak, C., Durazo-Arvizu, R. & Mathews, H. (2008). Effect of mindfulness based stress reduction on immune function, quality of life and coping in women newly diagnosed with early stage breast cancer.

Unit 4

Upon term of this unit, the student should be able to identify the main intervention models based on the psychoneuroimmunology approach used to improve health.

Objectives:

- a. Know empirical evidence of the effect of relaxation and visualization on the Immune System.
- b. Describe the relaxation and visualization techniques, concepts and physiological effects.
- c. Develop skills in the application of these techniques through of the relaxation and visualization exercises experience

Assigned readings:

- Trakhtenberg, E. (2008). The effects of Guided Imagery on the Immune System: A critical review.
- Wahbeh, H., Haywood, A. Kaufman, K. Harling, N. & Zwickey, H. (2009). Mind-Body Medicine and Immune System Outcomes: A Systematic Review

Suggested readings:

- Smith, N. & Tausk, F. (2010). Strees, relaxation and general well-being.

TEACHING STRATEGIES AND ACTIVITIES

1. Group discussions
2. Audio-visual presentations
3. Relaxation and visualization exercises

RESOURCES

1. Library resources
2. Audiovisual media

STUDENT'S EVALUATION CRITERIA AND GRADING SYSTEM

Attendance to classes is mandatory, following the School policy. Students will be evaluated for their participation in the group discussions.

Grade is Approved or Not Approved

OTHER IMPORTANT INFORMATION

Diversity Statement

Diversity relates to the acknowledgement of the human condition in all manifestations; its similarities and differences. Diversity seeks to understand different biopsychosocial experiences. It strives towards the human values of equality, respect, and acceptance, within a multicultural world whose boundaries have been overshadowed by technology and globalization. Diversity is the antithesis to oppression in all its manifestations (e.g. sexism, racism, exploitation) and to discrimination in any form, including discrimination due to sexual orientation, physical (dis) Abilities, socioeconomic status, worldviews, places of origin, cultural orientation, primary language, or to any other human characteristic, preference or state.

The notion of diversity is central to the study of human behavior. It requires the development of self-awareness of prejudiced attitudes. It includes understanding of differences in worldviews associated to the psycho-cultural and psycho-economic background of recipients of psychological services. Our training program promotes the awareness of subtle and “invisible” prejudice (e.g. homophobia) acquired during formative years.

Request for Reasonable Accommodations

Students in need of accommodation based on the impact of a disability should contact the professor privately to discuss the specific need. Students with documented disabilities should contact the Academic Deanship Office to coordinate reasonable accommodations.

Attendance Policy

After three absences for a 3 credit course, or 2 absences for a 2 credit course, the student will automatically be dropped from the class unless the professor recommends otherwise. The complete institutional attendance policy is included in the Appendix.

Honor Code Reminder

Any violation of the ethical dispositions of our institution or program will be automatically referred to the corresponding authorities. For the present course, plagiarism may lead to obtaining a grade of “0” on the plagiarized work and this would most probably lead to a failing grade in the course. Students found to violate this policy may be referred to the institutional Promotions Committee with a recommendation of dismissal from the program. The complete plagiarism policy is included in the Appendix.

Note

This syllabus is a guide and is subject to change according to circumstances that may arise during the semester. Students are responsible for all announced changes in the syllabus.

REQUIRED TEXTBOOKS

Ader R, Felten DL. & Cohen N. (1991): Psychoneuroimmunology (II. edition). Academic press, New York. 1991.

Daruma, J. (2004). Introduction to Psychoneuroimmunology. ELSERVIER, Academic Press.

BIBLIOGRAPHY

Ader, R ; Cohen, N and Felten, D. (1995). Psychoneuroimmunology: Interactions between the Central Nervous System and the Immune System. The Lancet 345:99-103

Besedovsky, H, Herberman, R, Temoshok L & Sendo F. (1996). Psychoneuroimmunology and cancer: fifteenth Sapporo Cancer Seminar. Cancer Res; 56(18): 4278-4281.

Besedovsky, H. & Sorkin E (1977). Network of immunen-euroendocrine interactions. Clin Exp Immunol; 27(1): 1-12.

Biondi M. & Zannino LG. (1997). Psychological stress, neuroimmunomodulation, and susceptibility to infectious diseases in animals and man: a review. Psychother Psychosom. 66 (1): 3-26.

- Boll, T., Bennett, S., Perry, N. & Rozensky, R. (2004). Handbook of Clinical Health Psychology. American Psychological Association. Washington, DC.
- Irwin, M. (2007) Human psychoneuroimmunology: 20 Years of discovery. *Brain, Behavior and Immunity*; 22 (2): 129-139.
- Kiecolt-Glaser J, Glaser R. (1991). Stress and immune function humans. in: Ader R, Felten DL, Cohen N. (eds) *Psychoneuroimmunology II*. Academic Press, NY.
- Lazarus, R y Folkman, S (1986). *Estrés y Procesos Cognitivos*. España. Ediciones Martínez Roca.
- Smith, N. & Tausk, F. (2010). Stress, relaxation and general well-being. *Preventive Dermatology*. (1): 3-16.
- Solomon GF. (1993) Brief Communication: Whither psychoneuroimmunology? A new era of immunology, of psychosomatic medicine, and of neuroscience. *Brain, Behavior, and Immunity*. 7 (4): 352-366.
- Trakhtenberg, E. (2008). The effects of Guided Imagery on the Immune System: A critical review. *International Journal of Neurosciences*. 118 (6): 838-855.
- Wahbeh, H., Haywood, A. Kaufman, K. Harling, N. & Zwickey, H. (2009). Mind-Body Medicine and Immune System Outcomes: A Systematic Review. *The Open Complementary Medicine Journal*. 1, 25-34.
- Webster, J. & Glaser, R. (2008). Stress hormones and immune function. *Cellular Immunology*. 252: (1-2) 16-26.
- Weigent DA, Blalock JE. (1995). Associations between the neuroendocrine and immune systems. *J Leukoc Biol* ; 58(2):137-150.
- Witek-Janusek, L., Albuquerque, K., Rambo, K., Chroniak, C., Durazo-Arvizu, R. & Mathews, H. (2008). Effect of mindfulness based stress reduction on immune function, quality of life and coping in women newly diagnosed with early stage breast cancer. *Brain, Behavior, and Immunity*. 22 (6): 969-981.

APPENDIX

INSTITUTIONAL ATTENDANCE POLICY

Attendance at lectures and laboratory exercises is mandatory unless excused because of illness or by previous authorization of the professor in charge of the course. Each department will decide the relative weight to be given to the attendance in calculating the final grade.

Attendance to clinical activities involving patients, patient models, and similar types of activities is considered part of the students' professional responsibility and is mandatory. Absence may be excused after the student consults with the respective department chairperson. Three unexcused absences may adversely affect the final grade for a course.

Incomplete work due to illness or other serious circumstances during the course will be handled according to departmental policies, which must be provided to the students in writing at the beginning of each term. Faculty are not obligated to repeat lecture/laboratory topics that were presented at scheduled times and dates.

PROGRAM POLICY ON ACADEMIC HONESTY AND PLAGIARISM

There are different ways in which a student may incur in one of the various forms of academic dishonesty. Lack of knowledge does not justify academic dishonesty as common sense usually helps to prevent potentially problematic situations. In case of doubt, the standards of academic honesty call for the student to ask the professor or advisor. The most frequent form of academic dishonesty is plagiarism. According to the Random House Webster's college Dictionary plagiarism is: *"the unauthorized use of the language and thoughts of another author and the representation of them as one's own. 2. something used and represented in this manner"*.

Our faculty recognizes that plagiarism in any of its forms and/or manifestation is a serious offense both in the academic and the professional world. Some of the acts that constitute plagiarism are:

- a. Using words or thoughts of authors without giving due credit.
- b. Presenting work done for one course to fulfill the requirements of another course (self-plagiarism).
- c. Taking credit for phrases or ideas of other authors to produce a collage of ideas that have not been created by the student.
- d. Not using quotation marks to identify the exact words of an author.
- e. Taking information from Internet without citing the source.
- f. Buying papers from the Internet or from other sources.
- g. Using another student's paper or clinical report to satisfy course requirements.

Each professor will evaluate alleged cases of academic dishonesty and will proceed to deal with each case according to institutional policies and procedures.