**PSYC 360 Psychopharmacology**

**Course description:**

This course provides an overview on neurobiology of behaviors and psychological disorders, and the mechanisms of treatments used in the mental health with a focus on medications.

This course content will be broken in 3 essential parts:

- The first part will be an overview on the brain's structural and functional anatomy: How does the static brain look like? How does the brain function?

- The second part will be a deeper look into the neuroscience of normal behaviors, and the pathophysiology of common psychological illnesses: Which area of the brain is responsible for normal behaviors, and what are the underlying biological changes in brain in presence of disorders?

- The third part covers treatments. How treatment affect the brain: We will cover an overview of the pharmacological mechanisms behind the most commonly used medications in mental health. We will emphasize on practical lessons from pharmacological studies: What should I know about major drug classes? what are the positive and negative effects? How can I educate the patients about their medications? How to collaborate with prescribers?

**Course Format:**

Instructional materials will include lectures, audiovisuals, reading, class discussions. Every topic will be introduced by a case discussion in order to illustrate the practical part behind every topic.

**Reading material:**

Specific chapters from the textbook: Handbook of Clinical Psychopharmacology for therapists, and selected articles.
Course content:

Part 1: the Brain (2 sessions)
- Structural neuroanatomy
- Neurons and synapses
- Neurotransmitters
- Brain circuitry

Part 2: Neural basis of behaviors and psychological disorders (4 sessions)

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<thead>
<tr>
<th>A-Behaviors:</th>
<th>B-Disorders:</th>
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<tbody>
<tr>
<td>Social attachment</td>
<td>Mood disorders</td>
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<td>Pleasure</td>
<td>Anxiety disorders</td>
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<td>Fear</td>
<td>Obsessive compulsive and related disorders</td>
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<td>Memory and Attention</td>
<td>Trauma related disorders</td>
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<td>Psychotic disorders</td>
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<td>Dependence and addiction</td>
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Part 3: Mental health treatments -focus on Psychopharmacology (6 sessions)

- Antidepressants
- Anxiolytics
- mood stabilizers
- antipsychotics
- Other selected drugs
2-Pharmacology of drugs of abuse

3-Peace treaty: Neuroscience: the common ground for psychopharmacology, psychotherapy and brain stimulation:

- Lessons learned from imaging studies: how treatments affect the brain?
- Psychology and biology: a two way streets
- the psychodynamics of medications
- Collaborative work between therapists and psychopharmacologists: take home messages from the class to the clinic.

Evaluation:

A-In class participation

B-Group presentations:
1-Beyond DSM5: From syndrome to symptom based research in mental health.
2-Neuroscience of psychotherapy.

C-Quizzes and exams:
Quiz (part 1)
Midterm (part 2)
Final (part 3)

D-Reflection notes: Write 1 or 2 pages, font size 12, double space. This exercise is intended to stimulate you to think about these two topics. You can write whatever you want. You will not be graded on your opinion.
1- Opinion on advantages and limitations of medications in treating mental illnesses.
2-How advances in neuroscience can affect the future of traditional psychotherapeutic practices?

Final Grade (/100):

- In class participation (7.5%)
- presentations (7.5%)
- Reflections (10%)
- Quiz (15%)
- Midterm (25%)
- Final exam (35%)