Course Information
Location: TBD
Time: Tuesday, 10.10 AM -12.00 PM
Office Hours: TBA
Office Hours Location: TBA

Instructor Information
Randy P. Auerbach, PhD, ABPP
Email: rpa2009@cumc.columbia.edu
Phone: (646) 774-5745
Office Location: 1051 Riverside Drive, Pardes 2407, New York, NY 10032

Course Description
Adolescence is a peak period for the onset of mental disorders and suicidal behaviors. The seminar is designed to enhance understanding of topics including, prevalence, etiology, risk factors, mechanisms, prevention and treatment approaches, and ethical considerations related to clinical research.

Prerequisites
The seminar is open to undergraduate students who have completed UN1001 (Science of Psychology) or an equivalent introductory course in psychology. Coursework in mental disorders and/or research methods is strongly recommended. Enrollment will be limited to 12 students.

Role in the Psychology Curriculum
The course is designed to complement material addressed across a range of subject matters in other psychology courses, including abnormal psychology, research methods, and affective neuroscience. In doing so, the course will provide a framework for students to think deeply about the onset, persistence, and treatment of mental disorders. Most critically, the seminar will encourage students to think carefully about what can be done to improve clinical outcomes and how we know whether treatments work.

The course can be used to fulfill the following degree requirements:
- For Psychology majors and concentrators, and for students pursuing the Post-baccalaureate certificate in Psychology, this course meets the Group III (Social, Personality, & Abnormal Psychology) distribution requirement.
- For Psychology majors and Psychology Postbac students, it fulfills the seminar requirement.
- For undergraduates pursuing the Neuroscience & Behavior major, it fulfills the advanced seminar requirement in the Psychology portion of the major.
- Junior and senior Neuroscience & Behavior and Psychology majors will have priority for registration. However, for non-majors in the College and in G.S., this course could count as one term of the natural science requirement, provided the student has taken the prerequisite courses and has instructor permission.

Motivating Questions
1. Despite increased awareness of mental health problems and better access to treatment, why is the prevalence increasing?
2. Reducing the prevalence of mental disorders and suicide is predicated on knowing what factors contribute to the onset and persistence of mental health problems. Recent NIMH initiatives place a premium on elucidating neural circuitry that may underlie mental disorders. Nevertheless, how do we efficiently and effectively translate affective neuroscience to clinical applications?

3. Technology affords new inroads for intervention. However, there are key ethical considerations that must be considered; particularly as it relates to privacy. On the one hand, technology, such as smartphones, may play a pivotal role in delivering just-in-time interventions. On the other hand, technology may have unintended negative consequences (e.g., invasion of privacy, iatrogenic effects). How do we balance technological advancements with ethical clinical care?

Course Overview
The prevalence of adolescent mental disorders and suicidal behaviors continue to rise, and these issues portend long-term negative consequences, including higher rates of college attrition, relationship difficulties, occupational challenges, and earlier mortality. Within this course, we will discuss research that clarifies the state of the problem and do so in the context of our current understanding of theory and mechanisms that may explain the onset, persistence, and recurrence of mental disorders and suicidal behaviors. Material covered within the course will integrate diverse areas of research, including psychiatric epidemiology, behavioral phenotyping, affective neuroscience, influences from (social) media, cultural considerations, prevention and treatment efforts, technological advancements, and ethical considerations. The course is designed to have students think deeply about why adolescence is a peak period of onset and to identify necessary gaps that we need to address to improve mental health outcomes.

An important consideration for this course is that there may be some material that is upsetting or triggering. If any of the readings or material from class is distressing, please communicate directly with the Instructor. Please also be aware of the resources available to you on campus, including Counseling and Psychological Services (https://health.columbia.edu/content/counseling-and-psychological-services) and Nightline (http://blogs.cuit.columbia.edu/nightline/). More resources also are offered through the Office of University Life (https://universitylife.columbia.edu/student-resources-directory#health).

Course Objectives
1. Students will obtain a clear understanding regarding the scope of adolescent mental health problems.
2. Students will learn about leading adolescent mental health theories across mental disorders and suicidal behaviors, and in doing so, identify how these theories have been advanced to develop prevention and intervention programs.
3. Students will learn about how certain factors (e.g., race, gender) and mechanisms (e.g., neural deficits) may confer risk for mental health issues.
4. Students will learn to think critically about the limitations of extant research and will be encouraged to work cooperatively to clarify next steps to advance clinical research in this area across diverse methodologies (e.g., affective neuroscience, technology, treatment).
5. Students will develop effective oral and written skills.

Course Organization
Class. The class will meet once per week. Each 1 hour and 50 minute class will primarily consist of student presentations. Students will provide overviews of the weekly readings as well as a student-selected reading. For each class, students should be prepared to participate.
Assignments. Student grades will be determined by attendance, participation, weekly thought pieces, a presentation, and a final paper. More detail about grading is provided below.

Grading
- 25%: Attendance and Participation
- 25%: Thought Pieces
- 25%: Presentation
- 25%: Final Paper

Attendance and Participation. Attendance and participation in every class is expected, and this serves as the foundation for a seminar course. Attendance will be taken at the beginning of each class. Students should be active contributors throughout each class. If you need to miss a class, please notify me as soon as possible. One absence will not negatively impact your grade, but documentation is requested (e.g., dean’s note, doctor’s note). You will still be responsible for the work from the missed class.

Thought Pieces. The seminar is enriched when everyone completes the reading. Prior to each class, students must submit a short (1-2 paragraphs) Thought Piece via Courseworks the evening before the class (no later than 6 pm; including when it is your turn to present). The purpose of the Thought Piece is not to summarize the readings. Rather, it is an opportunity for you to think deeply about what you read: (a) what are the central issues discussed and how does this relate to the field, (b) what are problems in the approach/method highlighted, (c) what are the major obstacles that remain, (d) what are ethical considerations that need to be addressed? Each Thought Piece will be graded from 1 (poor) to 10 (excellent). Each submission should clearly state the primary issue/question being addressed (2 points). Then, clarify the importance of the issue (2 points) as well as what can be done from a clinical/research/policy capacity to better address the current problem (4 points). Finally, clarity of writing (2 points) also will factor into the grading.

Presentation. Each student is expected to present for one class period. Depending on the number of students in the seminar, it may be that some students present alone or as a pair. Presentations will provide an overview of the reading as well as the presenter-selected reading. A presenter must select a complementary reading that will be distributed to the class at least a week before the presentation. This reading must be approved by the Instructor. Students are encouraged to attend office hours to discuss options for the complementary reading (please allow enough time so that articles can be distributed as early as possible). This reading serves to provide an alternative perspective on the topic for the week. Critically, presentations do not merely summarize the readings. Rather, strong presentations will highlight remaining challenges, questions, and issues in the existing research. Presenters are encouraged to stimulate conversation and debate within the class. Presentations will be graded on: (a) quality of slide deck (5 points), (b) command of the material (5 points), (c) ability to highlight key gaps in the field (10 points; this also includes choosing an appropriate complementary reading), and (d) ability to stimulate active conversation among classmates (5 points). Students are strongly encouraged to meet with the Instructor to review the slide deck and articles prior to presenting. This is not a requirement, but it is strongly encouraged. Slides must be sent to the Instructor 48 hours in advance of the class. Feedback on all presentations will be provided in each of these domains.

Final Paper. Students will prepare a final paper (10-12 pages, double-spaced, excluding references). The paper can address any topic covered by the class, and it will be an expansion on material already covered in class during the weekly presentations. Students are required to discuss the paper topic with the Instructor. As part of the approval process, students must submit
a half- to one-page description on their paper topic (along with a list of potential sources), and this must be approved. The overall purpose of this exercise is to think deeply about what we know, what we don’t know, and how we can move forward in a given area of adolescent mental health research. Papers should include appropriate citations and will be consistent with APA (6th Edition) format guidelines. Grading will reflect: (a) inclusion of clear thesis related to a specific class topic (5 points), (b) support of thesis using current research (10 points), and (c) inclusion of “next steps” to addressed identified gaps (5 points). Writing style and appropriate referencing also will be considered (5 points).

Late Assignments. Completing assignments on time is strongly encouraged. If there is a suitable reason for turning an assignment in late, please discuss with me in advance. Unless we have agreed on an extension, all late work will be penalized.

Students with Disabilities
If you are a student with special needs, please meet with me before the first class. We will ensure that appropriate accommodations are made. Please also contact the Disability Services prior to the first class in order to ensure that accommodations are prepared (https://health.columbia.edu/disability-services).

Academic Integrity
You are a vital member of the intellectual community at Columbia University. Core to our mission is upholding principles of academic integrity and honesty. At all times, present your own work and ideas—plagiarism is strictly prohibited. If you are falling behind in the seminar, please speak with me at any time. Another fundamental component of academic integrity is respect. The classroom should be a safe place to explore different ideas in a respectful manner. Please review Columbia College’s Honor Code and Guide to Academic Integrity: http://www.college.columbia.edu/academics/academicintegrity.

Course Topics & Readings
Readings will be provided as pdfs on CourseWorks. Each student is responsible for reading every article each week. Additionally, the presenter(s) will select a complementary reading that will be distributed to the class at least a week before the presentation, which also should be read. Some material covered in this course may be distressing. If at any time course materials (e.g., readings, presentations, seminar discussions) result in distress or are triggering, please contact the Instructor.

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<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
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<tr>
<td>1</td>
<td>Course Introduction 2</td>
<td>ii. Insel, T., Cuthbert, B., Garvey, M., Heinssen, R., Pine, D. S., Quinn, K., ... &amp;</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Questions</td>
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| 9/10/19 | Anxiety Disorders | - What are the primary differences between a DSM vs. RDoC approach to understanding mental disorders?  
- What are the research priorities at NIMH, and how does this impact clinical research?  
- What is attention bias and how does it relate to anxiety disorders?  
- What are important developmental considerations regarding attention bias?  
iv. NIMH Strategic Plan for Research: Strategic Objectives 1-4 (pp. 21-49). |
| 9/17/19 | Treatment for Anxiety Disorders | - Can attention bias be effectively targeted in the treatment for anxiety?  
- What is Attentional Bias Modification, and what is the efficacy?  
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<tr>
<th>Date</th>
<th>Major Depressive Disorder</th>
<th>Treatment for Major Depression in Adolescents</th>
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<tr>
<td>4</td>
<td>- What is major depressive disorder (MDD)?</td>
<td>- What predicts treatment outcome?</td>
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<td>9/24/19</td>
<td>- Is MDD a single disorder?</td>
<td>- CBT is a gold-standard treatment, but why does it work?</td>
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<td>- What may be important for improving our understanding of MDD?</td>
<td>- What are neural predictors of treatment response?</td>
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<td>- What are the neural correlates of anhedonia, and why may this prove important for</td>
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<td>elucidating pathways to MDD?</td>
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<td>ii. Pizzagalli, D. A. (2014). Depression, stress, and anhedonia: toward a synthesis and</td>
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<td>integrated model. <em>Annual review of clinical psychology</em>, 10, 393-423.</td>
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<td>iii. Auerbach, R. P., Pisoni, A., Bondy, E., Kumar, P., Stewart, J. G., Yendiki, A., &amp;</td>
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<td><em>Neuropsychopharmacology</em>, 42(10), 2087.</td>
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<td>understanding of anhedonia. <em>JAMA Psychiatry</em>.</td>
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<td>6</td>
<td>10/8/19</td>
<td>Marijuana Use in Adolescents</td>
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<td>• How does early marijuana use impact the developmental trajectory from adolescence to adulthood?</td>
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<td>• What has been the impact of marijuana legalization on youth use?</td>
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<td>• How do social norms, social media, and exposure to pro-marijuana messages affect adolescent use?</td>
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<th>7</th>
<th>10/15/19</th>
<th>Marijuana Use and the Developing Brain</th>
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<td>• What is the impact of marijuana use on brain function?</td>
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• What is the impact of marijuana use on brain structure?
• If marijuana use negatively affects brain development, what are the long-term consequences?


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**Clarifying Risk for Psychosis**

- Why do researchers study ultra high-risk individuals to learn more about psychosis?
- What are clinical indicators and biological markers of conversion in high-risk youth?
- How can RDoC help inform risk for psychosis?


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**Prevention and Treatment of Psychosis**

• Is it possible to prevent onset in people at high-risk for psychosis?
• Is psychotherapy effective for psychosis?
• What are effective internet-based approaches for treating psychosis?
• Can we predict who responds to treatment during the first-episode of psychosis?


10 11/5/19

**Suicidal Thoughts and Behaviors**

• What is the prevalence of suicidal thoughts and behaviors in adolescence?
• What is the function of suicidal behaviors?
• Does the media influence suicidal behaviors?
• Are under-represented youth more at risk, and if so, why?


11 11/12/19

**Suicidal Thoughts and Behaviors**

• What predicts the transition from thinking about suicide to acting?

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<tr>
<th>Mental Disorder Comorbidity</th>
<th>12 11/19/19</th>
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<td>• Comorbidity is the rule not the exception. Why should this inform our approach to treatment?</td>
<td>iii. Auerbach NIMH Grant Specific Aims (general study overview from ongoing study of suicide in adolescents)</td>
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### Research Domain Criteria

- How does RDoC differ from the DSM?
- What are the pros and cons to using an RDoC approach?
- How can this be applied to advance clinical research in adolescents?
- What is the best way to move forward with clinical research – are we moving in parallel directions (i.e., DSM-based vs. RDoC-based research)?

#### i. Research Domain Criteria Domains and Constructs

- Review on NIMH website


### Technology and Adolescent Mental Health

- Technology can be transformative, but is it effective for treatment mental health problems in adolescents?
- Are certain symptoms or behaviors more malleable via smartphone apps and/or internet-based approaches?
- When is assessment actually treatment, and is this one of the first steps for just-in-time interventions?
- What are advantages to internet-based treatment approaches?


