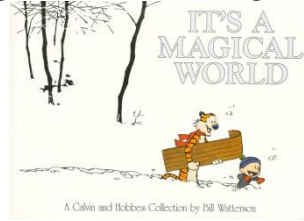


Psychology 507 Pharmaco-Therapy

(Revised December 2016)

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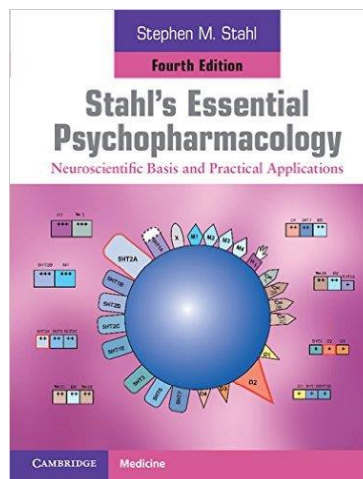
♪ *Note: This syllabus is subject to small changes once the semester begins. These will include corrections and slight refinements in the assignment(s) – nothing major.*

Description of Course from Graduate Catalogue:

507. Pharmaco-therapy. Three semester hours.

This course provides an examination of psychoactive medications and their use in the treatment of mental and behavioral disorders. The efficacy and safety of medications will be discussed. The course presents basic principles of pharmaco-therapy that are the rationales behind the pharmacological treatment of psychological disorders. Applied components will relate to the aspects of the course material to mental health service delivery. The class also examines the historical psychopharmacological perspective, basic pharmacology underlying the use of medication, and recent research in the field. Prerequisites: Admission to a Psychology Graduate program.

Textbook: Stahl, S. M. (2013). *Stahl's essential psychopharmacology: Neuroscientific basis and practical applications* (4th ed.). Cambridge, UK: Cambridge University Press. [This is a paperback, currently (late December 2015) priced at \$78.36 on Amazon.com. It is also available on Kindle/eTextbook (at \$41.60), but that format may be more difficult to work with in the context of this course's demands.]



You will also need access to the following book to write your paper:

American Psychological Association. (2009). *Publication manual* (6th ed., second printing or later). Washington, DC: Author.



And never forget, you can get almost any book cheaper than you can at the university bookstore.

WEB ENHANCEMENT:

We will manage this course in part using online “web enhancement.” This fact has a number of implications for your conduct and success:

1. As soon as available you should go to the online web site for this course, complete the tutorial (if you like), and familiarize yourself with what is there (which will be added to as the semester progresses). You may access eCollege by going to your My Leo account and clicking on eCollege.
2. **You will turn in most (if not all) written assignments in assigned “dropboxes.” Use this formula to name the files you turn in this way: YOURLASTNAME.YOURFIRSTNAME.AssignmentName.Date. If I were going to turn in a “psychopharmacology” assignment on May 4, 2016, the file name would be BALL.STEVE.psychopharmacology.5.4.2016. Check the Dropbox Protocol link on eCollege for more details.**
3. You will receive written feedback for most (if not all) of your written assignments by way of eCollege.
4. **You will take exams online.**
5. You will retrieve documents to read from me by way of the Doc Sharing tab, and web sites to read on the “Webliography” tab. Some of the latter will be accessible by way of links placed strategically within each week’s overview and assignments.
6. **You will need to check the Announcements section on the course home page daily.**
7. **You will need to check your university e-mail (-----@leo.tamu.edu) daily.**
8. Ask general questions (that all classmates can hear and want to know the answer to) by using the email function on eCollege sent to all class members and me (you can do this through the virtual office as well); ask more personal questions (that other students should not or would not want to hear) through the regular university email service (I have to use my university email address; you can use another one if you like)
9. **You are responsible for reading and complying with the terms of this syllabus.**
10. And you are responsible for learning to use eCollege.

Our Contractual Agreement:

Through the university I am offering this course to you (and a grade in it) in exchange for your doing the work specified in this syllabus, and otherwise complying with university regulations and requirements. If you choose to continue your enrollment in the course (whether you attend or not), I will assume that this agreement is consummated. You and I will thus be responsible for the content of this syllabus and complying with its specifics. Each of us is further

acknowledging that we will abide by and accept the outcomes generated in this course through the appropriate application of the guidelines of its syllabus.


General Objectives of the Course:

Students taking this course should be able to do the following at the end of this course:

1. Understand, use, and articulate an “intuitive” model of the biochemistry entailed in neural transmission and psychopharmacological action.
2. Describe the biological character of the neuron along the following dimensions:
 - a. DNA-RNA actions, and transcription factors – general model
 - b. Describe the way in which proteins are synthesized in the neuron, especially those of direct importance in neural transmission (both intracellularly and synaptically)
3. Describe and distinguish G protein-linked receptors and those based on ion channels (ligand-gated and voltage sensitive ion channels)
 - a. Structure and function in normal neural activity
 - b. Vicissitudes of these receptors under the influence of psychoactive drugs
 - c. First, second, third, fourth, fifth messengers,... and possibly further
4. Distinguish the different types of receptors for each neurotransmitter/cotransmitter system that are relevant to our current understanding of useful psychopharmacological action
5. Describe the character and function of neurotransmitter reuptake mechanisms, both at the neural membrane and at the vesicular level
6. Describe the known mechanisms of transmitter neutralization, and their relevance to psychopharmacologically effective drug action
7. Describe in general terms the way in which the genome affects and is affected by neural *and* psychopharmacological activity
8. Describe the fundamental neurochemical circuits that are entailed in psychopharmacology
9. Describe the way in which psychological symptoms can be thought of (at least in part) as expressions of neurochemical circuits
10. Describe the fundamental characteristics and (presumed) neural substrate of
 - a. Schizophrenia and other psychotic processes
 - b. Mood disorders
 - c. Anxiety
 - d. Pain
 - e. Sleep and wakefulness, and their irregularities
 - f. Attention and executive function
 - g. The cognitive decline of dementia, relating to separate etiologies as possible
 - h. Addiction and substance abuse
11. Identify by name (generic and trade) and their principal actions, behavioral changes associated with them (regarding symptom change, side effects, important interactions with other drugs or foods, etc.), the U.S. drugs currently available for the treatment of
 - a. Schizophrenia and other psychotic processes
 - b. Mood disorders
 - c. Anxiety
 - d. Pain
 - e. Disturbances of sleep and arousal
 - f. Attention-deficit/hyperactivity disorder (ADHD) and related attentional problems
 - g. The cognitive decline of dementia
 - h. Addiction and substance abuse
12. Describe important considerations in the prescription of psychoactive medication for


- children, pregnant women, and the elderly
13. Describe the general processes by which drugs in the United States are developed, tested, and marketed (including the use of patents and trade names)
 14. Identify optimal prescribing algorithms that physicians should follow for best practice for all the disorder groups in number 11 above
 15. Describe strategies for evaluating the medication regimens of your client or student, and communicating what you know to... whomever
 16. You will also gain knowledge of biological, cultural, developmental, and social influences on behavior and mental health, behavioral and emotional impacts on learning and life skills, and evidence-based strategies to promote social-emotional functioning and mental health

Topical Outline:

 *Note: This is an idealized plan. Reality and the necessity of slowing down on some material makes it simply a fond hope. We will do what we can though. Readings in the Stahl text should be obvious, but I will tell you what to read in class if you ask me. I will also post Powerpoint™ presentations on eCollege.*



- I. The nervous system – a brief review
- II. Neurotransmission
- III. Inventing, testing, and marketing drugs
- IV. G protein-linked receptors
- V. Ion channels, messenger systems, enzymes, fast & slow actions
- VI. Genetic and neurochemical circuits
- VII. Schizophrenia and psychotic process
- VIII. Mood disorders
- IX. Anxiety disorders and pain
- X. Attentional disorders
- XI. Sleep disorders
- XII. Dementia and related cognitive disorders
- XIII. Drug abuse and addiction; impulsive and compulsive behavior
- XIV. Evaluating your clients' pharmacological needs, and their physicians' choices; communicating with a prescribing physician appropriately

 *Note: this outline will be expanded once the semester begins (and probably before)*

Course Assignments and Requirements:

1. Students will take two cumulative examinations online through eCollege (at my discretion, the second and final examination may be conducted on paper in a classroom during the week that final examinations are scheduled). The online exams will be available for a designated amount of time, and they will be based on the readings, in-class presentations, and interactions, and will mostly be in multiple choice format (though there may be some essay and short answer questions). You will take the online exams outside of class time, and we will meet during the weeks that exams are

- scheduled in this way (including the week the final is scheduled, if it is online).
- Students will complete a case history critical review paper associated with the pharmacological treatment of five (5) cases in a designated area of clinical practice (by DSM-5 disorder, age, and, if relevant, sex). The review must be based on separate peer-reviewed journal articles that detail each of the five case histories you have chosen. It must also be in sufficient detail that a knowledgeable reader (e.g., the instructor) will recognize each case as a valid and comprehensive treatment involving not only psychopharmacology, but also counseling/psychotherapy, consideration of milieu, and a long and deep enough following of antecedent conditions, any prodromal symptoms, and short- and long-term outcomes. You will place this paper in the eCollege dropbox for the week (Week 14) before the final examination is scheduled (for me to grade), and in the docsharing location, also on eCollege, for other students in the class to have. The last exam may include items from these papers. The paper should be of practical value to the people in the class (mental health professionals and school psychologists who are not (usually) physicians, biologists, or professional pharmacologists). Write your paper in *strict* APA format (6th edition), and document it fully. Use 1” margins all the way around and 12-point, Times New Roman font, with no extra spaces between lines or paragraphs. Use the hanging indent option in Microsoft Word for your reference list, and write your paper as a Word doc or docx file (recalling that Microsoft Word is the “official” word processor of Texas A&M University – Commerce).

Grading Procedures:

The examinations and the paper will each count as 100 points (a total of 300 possible points). To get an A, you will need to earn at least 275 total points, and for a B you will need 240 to 274 points.

Here is the “rubric” by which I will assign you a score of up to 100 points on the papers you write:

Question	No, or Almost Not at All	Partially	Almost Completely
Did you introduce the reader comprehensively and in detail to each of the five cases, including the course of the disorder, the nature and course of the multidisciplinary or multimodal treatment (including medication, counseling/psychotherapy, etc.), the effectiveness of the treatment, any adverse effects, and the short- and long-term outcomes of the treatment? And are at least two of the cases unqualified or partial failures?	0	10	20
Did you demonstrate adequate knowledge and use of course content in writing your paper?	0	6	10
Did you provide a comprehensive critique of the course of drug treatment provided in each of the five cases, including both positive and negative aspects of the treatment with regard to treatment outcomes, adverse effects, and quality-of-life concerns?		10	20
Did you provide a comprehensive critique of the course of counseling/psychotherapy and other interventions provided in each of the five cases, including both positive and negative aspects of the interventions with regard to treatment outcomes, adverse effects, and quality-of-life concerns, and did you address the way these interventions may have interacted with the pharmacological interventions?		10	20
Did you write your paper in clear English sentences, organized and unified by the purpose of your writing?	0	3	10
Does the paper comply <i>entirely</i> with APA format and style?	0	1	10
Did you attach a complete and adequate References section identifying all the works cited in the body of the paper (which should be all the sources	0	5	10

you have consulted, used, and cited in your paper), including doi numbers where available and the appropriate use of the hanging indent option of Microsoft Word?			
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Maximum points under the rubric = 100. The number of points you earn will be your grade on the paper. Do not ask about how long the paper should be in pages. The answer will always be “long enough to meet the criteria specified in the rubric.”

Here is a table of topics I will assign class members, probably arbitrarily and capriciously.

Student	Topic
	Depression (major depressive disorder, adult and adolescent males)
	Depression (major depressive disorder, adult and adolescent females)
	Depression (major depressive disorder, children)
	Depression (persistent depressive disorder – dysthymia, children or adolescents)
	Depression (persistent depressive disorder – dysthymia, children or adolescents)
	Bipolar I disorders (adults)
	Bipolar II disorders (adults or children or adolescents)
	Premenstrual dysphoric disorder
	Schizophrenia (late adolescents and adults)
	Disruptive mood dysregulation disorder (children)
	Generalized anxiety disorder
	Obsessive-compulsive disorder
	Specific phobias
	Posttraumatic stress disorder
	Attention-deficit/hyperactivity disorder (children or adolescents or adults)
	Cluster B personality disorders (all four should be included among your cases)
	Anorexia nervosa
	Oppositional defiant disorders
	Autism spectrum disorders

Grading Procedures:

All other things being equal, you will perform better in this course if you come to class regularly. We are all adults and I understand that you may have many priorities, planned and unplanned, which exceed those of this course. Go, therefore, when you must, but note: Things happen in college classrooms which are crucial to becoming educated and for which it is difficult (perhaps impossible) to test. Sometimes these things are serendipitous and represent the most significant of our learnings; and of course in some class periods they may not happen at all. They usually are unpredictable and rely on spontaneous exchanges involving students and the professor. They may occur before the instructor arrives, or at a break. They are worth the wait and the intervening tedium. When you are absent – even if someone takes notes for you – you will miss them. To ensure that this vital part of your education is there for you, I will enforce the university's absence policy in the following way:

If you have excessive absences (either excused or unexcused), I will assign you a grade of "F" in this class. You may avoid this fate by officially dropping the course by the deadline to do so. For purposes of this policy, an absence occurs if you miss 10 or more minutes of a single class period, from the scheduled beginning (or my arrival, whichever is later) to the scheduled end of the period (or my dismissing you, whichever comes earlier). Absences become excessive as a direct function of how much actual class you are missing. Use the following table as a guide:

<p>Approximate Number of Scheduled Class Meetings</p>	<p>Minimum Number of Absences to Get an F</p>	<p>Warning Issued</p>
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15	4	with distribution of syllabus on eCollege (week 0)
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As noted elsewhere, some (but not all) work in this course may be made up if it was missed due to an excused absence. University policy permits the instructor of a class to define valid excuses for an absence. I include, in general the following things as valid reasons for missing a class:

- (1) participation in an authorized university activity;
- (2) illness of the student or a first-degree relative who cannot be provided *necessary* care without the student's missing class;
- (3) death in a student's immediate family; and
- (4) fulfilling one's legal responsibilities (jury duty, court hearings) as a citizen
- (5) documented alien abduction of (not by) the student lasting over 12 hours (3 hours if alien-induced pregnancy, or larval implantation, is documented).

Such excuses must be documented to my satisfaction, including support for the notion that you had no choices (e.g., alternative university activities, legal continuance, etc.). As noted in the table above, I will counsel you in some form as your absences accumulate to near critical levels.

If you miss the first exam with an approved excuse, I will assign your grade on the other test (which you must take) as your grade on the missed exam. If you miss both exams with excused absences, I will give you an incomplete for the course (if you otherwise are passing). The incomplete must be removed by the end within one year (lest the university convert it automatically to a grade of "F"). You, or someone with your power of attorney, must negotiate the terms of a contract for removing such an incomplete *before* final grades are due for the semester. Since you could miss the final due to a serious accident or illness, one which may incapacitate you for a time, you may wish to arrange for a limited power of attorney now.

Conduct:

Admission and attendance in a college or university form an honor and a privilege. Where tuition and other expenses are subsidized, either by private or public funds, the person has received an additional trust that inherently entails conducting one's affairs as a student within the constraints of civil society. In this class I will expect you behave in a way that is respectful of others, their right to receive (and deliver) elements of a college education, and their identities as unique persons in the world. I expect us all to act toward others as we would like them to act toward us.

I will also expect you not to plagiarize, steal or otherwise procure tests or other class materials that are not supposed to be publicly available (including copyright violations), or cheat on examinations. I will give you an F for any of these actions, and I will make an appreciable effort to have you dismissed from the university (though I will rarely be successful in the latter attempt).

Here are some other dos and don'ts that will also be a part of our code of conduct in class:

1. Far beyond the particulars of this course, do respect the divine principle of the universe, which seems to be detectable in other people. As one deity is said to have put it: "Inasmuch as you have done it to the least of these [e.g., other students and the teacher, other enemies], you have done it also to me."
2. Do remember that this course is about a limited area of empirical content; don't forget that there are bigger realities. This is just a course.
3. Don't talk trash in excess. Occasional right-brain language epithets may be okay for emphasis, but learn to use your language more elegantly than that (or remain silent).
4. Do take some time off from constant work during the semester. Do remember to reflect on things

- beyond the course. (This is not an injunction to ditch class, but rather a reminder to place your studies in perspective.)
5. Do let those who support and have supported your educational efforts know how much you appreciate them sometime during the term.
 6. Don't attack the person of another member of the class.
 7. Don't sexually (or otherwise) harass a member of the class.
 8. Don't steal others' work (plagiarism is a capital crime around here! – that is, it will be the certain cause of your getting a failing grade for the course).
 9. Don't distort the truth, about your data, its sources, or about your colleagues.
 10. Do be satisfied with where you are in your own professional development. Others may be farther along than you, but don't waste time envying them. Do work to become who you were meant to be.

Faculty members are required to include in their course syllabi the following statement: "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedures, Conduct)

NON-DISCRIMINATION POLICY

Faculty members teaching courses must also include in their syllabuses the following disavowal of discriminatory practices by the university (I have touched it up to name the university correctly, and to eliminate an unnecessarily ugly passive voice construction):

[Texas] A&M [University]-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, [we will maintain] an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression ~~will be maintained~~.

REQUESTS FOR SPECIAL ACCOMMODATIONS:

The university encourages/ requires faculty members to include in their course syllabi the following statement:

Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
 Texas A&M University-Commerce
 Gee Library
 Room 132
 Phone (903) 886-5150 or (903) 886-5835
 Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

ADDITIONAL RESOURCES:

Klykylo, W. M., Bowers, R., Weston, C., & Jackson, J. (2014). *Green's child and adolescent clinical psychopharmacology*. (5th ed.) Philadelphia, PA: Lippincott Williams & Wilkins.

GUY TEACHING COURSE:



Steve Ball

As a part of a closed gene pool
(some of which lies quietly in the background)

Steve Ball

Associate Professor of Psychology

academicstevie@yahoo.com

steve.ball@tamuc.edu

Office: Binnion 101/122

Phone (In Office/Developmental Cognition Lab – switches to fax after 7 rings, sometimes fewer): 903-886-5586 – go to Binnion 101 to find me.

Community Counseling & Psychology Clinic: Binnion 101 (903-886-5660)

Office Hours: by appointment (specific available times to be determined after classes begin). Follow now those that are probable:

Tuesday (Commerce): 115-315 pm

Tuesday (Mesquite): 6-7 pm

Wednesday (Commerce): 115-3 pm

Class Schedule:

PSY 507: M 7:20-10:00 pm (Mesquite campus)

PSY 691: TBA (B 101)