1PSY754
Neuroscience, Psychopharmacology and Neuroscience-Informed Therapies 2016

Summer/Fall, 2016
4 Credit hours

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Introduction to Course Structure

1PSY754 Neuroscience, Psychopharmacology and Neuroscience-Informed Therapies is taught over two semesters (Summer/Fall). Part A (taken early in the summer) introduces you to foundational considerations regarding a biblical view of affect and relationship, a basic understanding of brain development and psychopharmacology as they relate to psychotherapy, and specific attachment-based and neuroscience-informed therapies. Part B (taken over the fall semester) introduces you to additional neuroscience-informed therapies and their protocols, guides you in the development of related skills by clinical practice of them and allows you, in small groups, to develop an articulated statement of your current approach to conducting therapy.

This syllabus is divided into Parts A and B to allow you clearly to see the material for each segment of the course.

Course Description: Part A

Recent developments in neuroscience and psychopharmacology have contributed greatly to the fields of psychology and psychotherapy. Awareness of brain functioning has contributed information that helps clinicians better to understand long established therapy practices and has contributed to new approaches to old problems. Increased awareness of the attachment process and of the role of interpersonal interaction in individual development and ongoing functioning has provided a framework that highlights the systemic nature of intrapsychic, intimate and family relationships. This course is intended to provide second year graduate students with a biblical framework regarding the importance of affect and relationship, a basic understanding of brain functioning as it relates to issues such as child development and parenting and as it informs various treatment approaches such as emotion focused therapy (EFT), Gottman therapy, schema therapy and pragmatic/experiential therapy for couples (PET-C). During Part B of the course, you will learn the protocols of selected therapies, employ them in a clinical setting and prepare an integrative paper and video demonstrating your understanding and skills.

After the completion of Part A of this course, you will take 1NT613, Paul and Relationships. The neuroscience foundation of this course will inform and in turn be informed by the biblical studies and exegetical work to be done in 1NT613. Paul’s letters and other passages studied will contribute to the framework within which the evidence-based therapies will be assessment and implemented.

Prerequisites: It is assumed that upon entering 1PSY570 you are familiar with materials taught in earlier required courses: 1PSY501 Fundamental Therapy Skills, 1PSY503 Advanced Therapy Skills, 1PSY622/1PSY624 Psychology and Theology, 1PSY562 Theory and Practice of Counseling, 1PSY564 Family as a Social System, 1PSY566 Clinical Practice of Marriage and Family Therapy. It is also assumed that you are concurrently engaged in ongoing clinical work and that you will critically employ theory and method from the course in your clinical work.
Other students: Students without these prerequisites must obtain permission from the professor to enroll in the course. Generally, they will do so as a directed study with assignments modified to accommodate their lack of prerequisites.

Course Objectives: Part A

At the end of Part A of the course, you will
CO1 Be able to demonstrate an understanding of important developments in neuroscience as they relate to psychotherapy
CO2 Be able to demonstrate an understanding of recent studies in attachment theory as they relate to psychotherapy
CO3 Be able to demonstrate an understanding of the logic and protocols of Emotion Focused Therapy and to evaluate them from a biblical perspective
CO4 Be able to demonstrate understanding of the logic and protocols Pragmatic/Experiential Therapy for Couples and to evaluate them from a biblical perspective
CO5 Be able to relate those protocols to neuroscience and to other approaches to therapy.

Course Process and Schedule

Course process

Part A - Summer

The lecture portions of Part A of this course will be taught during a single week. So it is crucial that you be prepared when class begins. Pre-class assignments are intended to help to ensure that you are ready. You have limited readings and a major video assignment that must be done in groups of three as you prepare DPS sheets and hold discussions about the materials. Most of your work will be done before the class meets. The steps for Part A include:

- Preparation work
  - You have a number of pre-class assignments, including a ‘brain exam’ and three Discussion/Preparation Sheets (DPSs).
- Attendance at class
- Overview Papers
  - You have two overview papers to complete after Part A of the class has finished

Part B - Fall

The fall portion of the course will meet weekly for most of the term. Class time will be focused on examining evidence-based, neuroscience-informed individual and couple therapies. Students in the course will take Gottman Level I Training, at a special Gottman University Outreach discounted rate. Your assignments during this portion of the course will center on rehearsing skills related to the therapies and preparing an integrative paper drawing together what you have learned from class, from rehearsals and from implementing the therapies in a clinical setting.

Course schedule for Part A

Class will meet five consecutive mornings: June 20-24. Course content will follow the outline below. Progress through the material varies. Additional approaches will be studied in Part B of this course.

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<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignments Due</th>
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<tbody>
<tr>
<td>6/15/16</td>
<td>Norden Documentation/Preparation Sheet 1 (DPS1)</td>
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<td>DPS1 Norden Video</td>
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<tr>
<td>6/15/16</td>
<td>Documentation/Preparation Sheet 2 (DPS2) Seigel, Johnson and Greenberg Readings</td>
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<td>DPS2 Questions on Seigel, Johnson and Greenberg</td>
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<td>6/17/16</td>
<td>Documentation/Preparation Sheet 3 (DPS3) Atkinson Readings</td>
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<td>6/17/16</td>
<td>Brain Identification Test Must be completed</td>
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<td>L1</td>
<td>6/20/16 Scripture on relationships and non-verbal communication</td>
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<td>L2</td>
<td>6/21/16 How our brains function</td>
<td>Seigel PIO</td>
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<td>L3</td>
<td>6/22/16 Attachment; Executive operating systems</td>
<td>Johnson CC</td>
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<td>L4</td>
<td>6/23/16 EFT; PET-C</td>
<td>Atkinson IE and DH</td>
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<td>L5</td>
<td>6/24/16 PsychoPharmacology</td>
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<td>Start of</td>
<td>1NT613 Post-class Assignments: Write ups and Video</td>
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### Policies and Important Information

**Submitting assignments**

Where to submit your work: All written work is to be submitted digitally to hurleypapers@gmail.com. NEVER, EVER give materials directly to Dr. Hurley. If an item is to be handed in, hand it in at the office. ALWAYS keep a physical or digital copy.

Anonymity: All written assignments and exams should be identified by the last five digits of your Self-Service ID number (SSID5) in the top header of each page and NOT by your name. Anonymity permits more objectivity in grading.

Text formatting: Items should be in Georgia Font, 12 points, double spaced. (Georgia font has been selected because research indicates it gets the best grades.)

Submission time and date: Items are due by midnight of the due date. The date stamp on the email will be considered the submission time and date of the item.

Document format: Submit your materials as .doc files. Handle graphics as .jpg files inserted in your .doc files, as indicate below.

Scanning items: Some items may be in graphic form rather than text. Scan them; save them as jpg files; insert them into your submitted document. If you have a problem achieving a scan or inserting it into your document, chat with someone. Many smart phone apps can do the scan for you.

Naming emails and files: Each submission must have the assigned assignment ID on the email title and on the attached assignment. Please match the capitalization and underscores of the assignment name exactly as they are stated in the syllabus. That will ensure that I know you have submitted it and it will allow the items to sort properly in the computer.

Assignment IDs: Assignment IDs have the form: Course_Year_Item_SSID5_SSID5. For instance: 1PSY564_2016_Paper_12345_56789. SSID5 means the last 5 digits of a Self-Service ID. If there are multiple authors, list all SSID5s at the end of the assignment ID, separated by an underscore.

Late work: A Due date represents the final date on which the item is acceptable. Schedule your time so that your work will be complete before the due date. In the professional world of mental health, deadlines are not suggestions. Late work will automatically receive a ‘D-‘ grade. After one day, the work will be assigned an ‘F’. Exceptions must be arranged beforehand with the professor.

### Grading

In general, I use a 12 point scale for/instead of letter grades (A=12, A-=11, B+=10...). This saves entering decimal points.

When you have non-normed exams with many possible points, the top score will be assigned full marks and other scores will receive marks proportional to that. This means, for example, that if the top score is 90%, it will receive full marks and 45% will receive half of the available credit. If the top score is an outlier, a lesser score may be set as the threshold for full marks. This method benefits students.
Major components of Part A

Scripture on relationships and non-verbal aspects of relationships. The opening segment of the course will examine biblical teaching about relationships and non-word aspects of relationships. The current brain studies have resulted in psychology transitioning from a cognitive-behavioral approach that had little place for emotion and experiential, non-word information to a cognitive-affective-behavioral approach which

Documentation/Preparation Sheets (DPS)

In order to document that you have read the materials and to ensure that your professor has an idea of questions that arise for you (thus making it MUCH more likely they will be answered in lecture/discussion times), you are assigned to complete a Documentation/Preparation Sheet (DPS: Available online in the Files Section of Canvas) on which you will record questions and comments on each reading and video by recording the source read or viewed, the location being of the item and your question or comment. This is perhaps tedious, but it will ensure that you engage with the material and that your professor is informed.

Spreadsheet columns.

- ‘Source’: Each item for inclusion in a DPS has an item identifier before it, e.g. A21 for the Siegel reading in DPS2 below. Place the item ID in the source column.
- ‘Topic’: A phrase identifying the topic of your question.
- ‘Question/Comment’: A question or comment arising from your reading/viewing the assigned material.
- ‘SSID5’: The last five (5) digits of your Self-Service ID

How many questions/comments?

- 1:5 Readings - The standard, default rate for Questions/Comments is at least one (1) per five (5) pages of most reading assignments
- 1:10 Reading - Some reading items can be reviewed rather than studied. For them, one (1) question/comment per ten (10) pages is adequate. The syllabus will specify when this ration is OK.
- Video: Video assignments vary in the number of questions per item. A typical rate would be one (1) per ten (10) or fifteen (15) minutes of video. The syllabus will specify what ratio is required.

Discussing the questions on your DPS.

When you and your study partners have all completed viewing a video or reading resource, you will have a discussion assignment intended to help you gain mastery and learn from one another.

- Meet together in the manner specified in the assignment to discuss the questions/comments on your DPSs.
- Note the start and stop times.
- Your syllabus will tell you what to put in the ‘Source’ column. You will then enter the number of minutes of the discussion in the ‘Location’ column and the start time, stop time and your partners’ names in the ‘Question/Comment’ column. As usual, your SSID5 will go in the SSID5 column.

If you have NOT completed some items in the assignment.

If you have not completed part of the assignment by the group discussion, identify explicitly what you have missed on the DPS as follows:

- Source: The item identifier (e.g. A21)
- Location: Leave blank
- Topic: ‘NOT DONE’
- Question/Comment: Blank
- SSID5: The last five digits of your SSID5

Affirmation.

Graduate students face serious time pressures. The DPS process is intended to promote your learning. It also presents a possible temptation to falsify your reports about what you have read/viewed. Better to take a hit on your grade than to lose your integrity! It has sometimes been said ‘You can’t expect what you won’t inspect.’ In order to encourage assignment completion and integrity, your DPS includes some affirmations about your work and instructions about identifying assignments which you have not completed. Please read them carefully.
includes them. This transition moves the field closer to the Scripture, which devotes much attention to emotion and to non-word aspects of life and relationships. Power Point slides in the 'Files' folder for this course on the Canvas website will guide you here.

**Brain function and Attachment.** Contemporary neuroscience is progressively shaping psychology and counseling. In simple terms, that is because neuroscience is studying brains and because our brains are intimately involved in our psychological functioning. The brain test, Norden videos and Seigel reading focus on brain function and on attachment process (reliable, secure, caring connection). Your pre-class tasks will acquaint you with these areas. You will document your preparation by means of Documentation/Preparation Sheets (Details below). Your post-class EFT and PET-C tasks will help you to articulate how brain function and attachment enter into these two neuroscience-informed therapies and how they relate to Scripture.

**Emotion-Focused Therapy (EFT).** EFT is an effective evidence-based treatment modality which is used both with individuals and couples. Although it is not formulated that way, the therapeutic process in general recognizes the rigidity of amygdala-driven protective processes and the benefit of safe, attuned empathic communication. Interestingly, recent research has noted that intense non-word learning (e.g. from trauma) is most subject to change when memory is being stored, either initially or after retrieval and engagement. Alteration is much reduced if protective schemas are activated. Thus the value of therapeutic interaction from a secure brain state. Susan Johnson’s strategies guide couples progressively to move from rigid, damaging, self-protective, wounding interactions to compassionate attachment-promoting interchanges (speaking truth in love) to instituting new attachment-bond-forming interactions. Leslie Greenberg recognizes the importance of brain state shifts reflected in emotional transitions and works to ‘replace emotion with emotion’ (Think ‘brain state with brain state’). His individual therapy guides clients to foundational changes in emotion states and, with them, approaches to life. Your pre-class readings and video observations for Part A focus primarily on Susan Johnson’s work. You will document your preparation by means of a Documentation/Preparation Sheet (Details below). Your post-class tasks ask you to prepare a clear statement summarizing and evaluating Johnson’s EFT.

**Pragmatic-Experiential Therapy for Couples (PET-C).** Brent Atkinson’s PET-C is a clear, well-established couples’ therapy which draws especially on the work of Gottman and Panksepp. Your Atkinson readings will prepare you to work further with his approach during the fall semester. Your pre-class tasks will acquaint you with his central process and expose you to his interventions. You will document your preparation by means of a Documentation/Preparation Sheet (Details below). Your post-class tasks ask you to prepare a clear statement summarizing and evaluating Atkinson’s EFT.

**Pre-class and Post-class tasks:** Course assignments are designed to promote engagement with and mastery of the central course material by individual and group assignments. Pre-class tasks help (force?) you engage with the material before the lecture portion of the course. This will dramatically increase your in-class learning. Post-class tasks help (force?) you to consolidate your understanding by written assignments.

Study group. The task assignments include triadic activities. Select two partners with whom to work. One group may need to be more or less than three.

**Pre-class: Reading/Viewing Assignments**

**Due Dates for assignments are on Course Schedule:** Be sure to check the due dates for your assignments. As with the brain test, failure to complete the DPS by the due date will carry a penalty of up to 10% of your final course grade.

**A1 Pre-class: Brain structure test (MUST be completed before the first class meeting)**

This is an acquaintance exam. It is a requisite, but does not contribute to your grade. If you do not complete it before class begins, there will be a 10% reduction in your final grade. It may be taken any time before class begins by requesting to do so at the MFTC office. Office staff must be present in their offices while you are taking your test. You will be asked to identify brain structures by providing their names and a brief description of their function. This acquaintance will prepare the way for class discussions. A copy of the test is attached to the end of this syllabus. You must master this diagram. You can repeat the test until you make no more than one mistake. You can prepare by reading the resources
below. They are sufficient for the exam. Additionally, the relevant portions of the Seigel and Atkinson readings are helpful.

A singularly nice brief description of the anatomy of brain can be found at:
http://psychology.about.com/od/biopsychology/ss/brainstructure.htm

Other useful information
http://www.pbs.org/wnet/brain/3d/ Great visual resource
http://www.brainexplorer.org Good explanations
http://www.waiting.com/brainanatomy.html Videos: Describes anatomy and damage
http://www.brainsource.com Bundles of info

DPSA2: Neuroscience
DPSA2 includes a reading and a video series, both related to neuroscience. You should carefully plan as a group of three to meet regularly to watch the videos.

A21 Daniel Seigel, Parenting from the Inside Out.
• Read. Read the entire book. Focus on the ‘Spotlight on Science’ portion of each chapter. Question/Comment to page ration: 1:5
• Discuss A21: When you have all finished reading Seigel, meet together for no less than 45 minutes to share your Q/C items and to discuss them.
  o Record your discussion on your DPSA2 as follows: Source: ‘A21D’; Location: length of the discussion in minutes; Topic: Leave Blank; Question/Comment: The start time, stop time and your partners’ names. As usual, your SSID5 goes in the SSID5 column

A22 Video: Norden, Jeanette, Understanding the brain, Videos Watch all 36 of the video lectures with your group. Use the following process for each lecture:
• Watch a lecture. As you watch the lecture, each group member, individually, should create at least four (4) questions/comments for that lecture.
• Record your questions/comments on your DPS as follows: Source column, identify the questions by the assignment ID and by the number of the lecture (e.g. A22L03 would identify the question as pertaining to the Norden videos (A22) and the third lecture in the series (L03) (NOTE: Use two digits for the lecture number so it will sort nicely in the computer. Thus you will have ‘L01’ for the first lecture and ‘L11’ for the eleventh lecture.)
• Discuss the lecture. After each video lecture, share the questions/comments of all group members and discuss them for at least 15 minutes. Record the lecture discussions by adding a ‘D’ (for ‘Discussion’) to the Source identified, e.g. A22L03D.

Submitting DPSA2
When you have completed the assignments for DPSA2, each group member should submit their own DPSA2 to hurleypapers@gmail.com, identified as follows:
• Title BOTH your email and DPS attachment: 1PSY574_$$$$_Ind_DPSA2_SSID5 (Where $$$ is the year and SSID5 is the last five digits of your Self-Service ID)

DPSA3: Emotion Focused Therapy
DPSA3 includes readings and a video series related to Emotion Focused Therapy. You should carefully plan as a group of three to meet regularly to watch the videos.

A31 Reading: Susan Johnson, Creating Connection. Read the text and become familiar with the rationale of her approach and with the steps and the logic of her process. Comment to page ration: 1:5

Discuss A31 and A32: When you have all finished the readings, meet together for no less than 45 minutes to share your Q/C items and to discuss them.

- Record your discussion on your DPSA3 as follows:
  - Source: ‘A31D’; Location: length of the discussion in minutes; Topic: Leave Blank;
  - Question/Comment: The start time, stop time and your partners’ names. As usual, your SSID5 goes in the SSID5 column

A33 Video: Susan Johnson, Emotion Focused Therapy (Video) This video is a series of therapy sessions by Susan Johnson. Watch them together as a group.

Use the following process for each therapy session:

- Watch a session. As you watch the session, each group member, individually, should create at least four (4) questions/comments for that session. Identify the ‘Source’ by the assignment ID and the number of the therapy session, e.g. A33S01 would identify the Johnson videos (A33) and S01 would identify the first session.
- Discuss the session. After each therapy session, share the questions/comments of all group members and discuss them for at least 10 minutes.
- Record your discussion of the session on DPSA3 by adding a ‘D’ to the Source ID, e.g. as follows:
  - Source: ‘A33S01D’; Location: length of the discussion in minutes; Topic: Leave Blank;
  - Question/Comment: The start time, stop time and your partners’ names. As usual, your SSID5 goes in the SSID5 column

Submitting DPSA3
When you have completed the assignments for DPSA3, each group member should submit their own DPSA3 to hurleypapers@gmail.com, identified as follows:

- Title BOTH your email and DPS attachment: 1PSY574_$$$$_Ind_DPSA3_SSID5 (Where $$ $$ is the year and SSID5 is the last five digits of your Self-Service ID)

DPS4 Pragmatic Experiential Therapy

Brent Atkinson’s Pragmatic Experiential Therapy for Couples (PET-C) is a well established couples' therapy which draws heavily on observations by Gottman and Panksepp. His approach and his exercises are eminently practical. You will work with them in more detail in the fall portion of this course. Your work for this portion of the course is intended to help you gain a general acquaintance with his approach. You have two readings and no video for this assignment.

A41 Reading: Brent Atkinson, Emotional Intelligence in Couple Therapy,

- Chapters 1-4 introduce you to his basic concepts. On your DPS4, have 1 question/comment per 5 pages for Chapters 1-4. 1:5
- The later chapters of this book show you how he implements his therapy. On your DPS4, have 1 question/comment per 10 pages. 1:10

A42 Reading: Brent Atkinson, Developing Habits for Relationship Success, A Workbook. This workbook is a useful resource for conducting therapy. It shows you how Atkinson applies his principles. On your DPS4, have 1 question/comment per 10 pages 1:10

Discuss A41 and A42: When you have all finished the readings, meet together for no less than an hour (60 minutes) to share your Q/C items and to discuss them.

- Record your discussion on your DPSA4 as follows:
Source: ‘A42D’; Location: length of the discussion in minutes; Topic: Leave Blank; 
Question/Comment: The start time, stop time and your partners’ names. As usual, your 
SSID5 goes in the SSID5 column

Submitting DPSA4
When you have completed the assignments for DPSA4, each group member should submit their own 
DPSA4 to hurleypapers@gmail.com, identified as follows:
• Title BOTH your email and DPS attachment: 1PSY574____$$$_Ind_DPSA4_SSID5 (Where 
$$$_ is the year and SSID5 is the last five digits of your Self-Service ID)

Post-Class Assignments
Note: All of your post-class assignments are due by midnight of the day before the first class meeting of 
1NT613 Paul and Relationships. You may begin on them any time. You will be best prepared to write them 
immediately after the course. The write-ups will probably take you 10-15 pages each. The EFT and PET-C 
write-ups are designed to have you get enough of a hold on the approaches to be able to articulate a synthetic 
overview of the protocols...to be able to describe your rationale and where they are going with treatment. 
This will serve you well in your clinical work. It is good to have an idea where you are aiming.

A5 EFT write-up
Prepare a paper explaining the basic rationale for emotion focused therapy (EFT) and explaining in your 
own words the role of each step in the treatment protocol. Explicitly, 1. relate each step to what you have 
learned about brain function and 2. evaluate it as relates to Scripture. These parts of the assignment are 
important to your grade. This is not intended to be a complex dissertation. Think of it as equivalent to 
sitting down to walk a colleague through the information. Ten to 15 pages is likely to be sufficient. Due 
date: Midnight of the day before 1NT613 Paul and relationships begins.

Submitting your EFT write-up
Submit your EFT write-up to hurleypapers@gmail.com, identified as follows:
• Title both your email and attached file: 1PSY574____$$$_Ind_EFT_Paper_SSID5 SSID5 
(Where $$$_ is the year and SSID5 is the last five digits of your Self-Service ID)

A6 PET-C write-up
Prepare a paper explaining the rationale for PET-C and explaining in your own words, the logic of the 
assessment phase and each of the three steps/phases of the treatment protocol (cf. Chapters 1-4). 
Include discussion of the role of individual sessions as well as couple sessions. Explicitly relate each 
phase to what you have learned about brain function and evaluate it as it relates to Scripture. Your paper 
must show an awareness of Smith and Greenberg on Internal Multiplicity (above). Your paper is 
intended to help you gain sufficient mastery that you can verbally explain PET-C. Ten to 15 pages is 
likely to be sufficient.

Submitting your PET-C write-up
Submit your PET-C write-up to hurleypapers@gmail.com, identified as follows:
• Title both your email and attached file: 1PSY574____$$$_Ind_PETC_Paper_SSID5 (Where 
$$$_ is the year and SSID5 is the last five digits of your Self-Service ID)
For each of the following:

Place the number of each item on the diagram above where the item is located. Then explain briefly its function on the lines provided below.

1. Frontal Lobe
   _______________________________________________
   _______________________________________________

2. Parietal Lobe
   _______________________________________________
   _______________________________________________

3. Occipital Lobe
   _______________________________________________
   _______________________________________________

4. Temporal Lobe
   _______________________________________________
5. Pons

6. Medulla oblongata

7. Cerebellum

8. Limbic System

9. Hippocampus

10. Amygdala

11. Fornix

12. Thalamus

13. Cingulate gyrus

14. Hypothalamus

15. Corpus callosum