

T602: Topical Seminar in Media Processes & Effects  
Topic: Measuring Psychophysiological Responses to Media  
Fall, 2022--Section 32211

**Professor**

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Note: Email/Messages sent via Canvas are not read

**Class Meetings**

Wednesdays 9-11:30am  
Franklin Hall 212 and the [Institute for Communication Research](#) (ICR)

**Office Hours**

By appointment, please see me immediately before or after class to book one.

**Course Description**

This course introduces the field of psychophysiology and explores its application to the study of mediated message processing. It begins with an introduction/refresher to experimental design. Then applies this to psychophysiology particularly, looking at its theoretical assumptions and history—both as a tool for studying media and more generally.

The course also covers specific measurement techniques. These include measurement of cardiac activity via the electrocardiogram (ECG); measurement of sympathetic nervous system activation via electrodermal activity (EDA); measurement of emotional valence via facial muscle activity through electromyography (EMG); and measuring visual attention through eye tracking.

The course includes a practical lab component where students learn and apply data recording and analysis techniques.

## Student Learning Outcomes

After successfully completing this class with a grade of B or above, a student will have demonstrated

- a general understanding of how experiments are used to establish causal links between two or more variables, the ability to identify and explain strengths and weaknesses of different experimental designs, and recognize internal and external threats to validity,
- the recognition of times where ethical decision-making in experimental research is required,
- an appreciation for the history of the use of physiological measures to understand the impact of media on audiences and the recognition that assumptions underpinning the *psychophysiological* approach leads to better understanding,
- the ability to pass the Collaborative Institutional Training Initiative (CITI) modules necessary to allow them to conduct human-subjects research at IU,
- the ability to create a basic experiment using Media Lab software,
- how to properly prepare human subjects for the safe and valid collection of ECG, EDA, EMG, and eye tracking data using software in the ICR,
- how to pre-process, clean, and initially analyze psychophysiological data to address hypotheses and research questions,
- an understanding of the basic anatomy of the human nervous system and how that relates to psychophysiological measures,
- a beginning understanding of APA writing style and how to use that to format a term paper,
- the ability to apply the content of this course to produce either a summary paper or research proposal focusing on their own area of interest in media.

## **Books**

There are **three required textbooks** for this course.

This one you need to get on your own. E-books are fine. But if you are starting your academic career in the social sciences, you shouldn't rent...you should buy. You should also buy the current (7<sup>th</sup>) edition.

*Publication Manual of the American Psychological Association, Seventh Edition (2020)*

[Note: referred to as APA in schedule]

These two required books you have already purchased at IU e-texts by paying a course fee.

Coleman, R. (2020). *Designing Experiments for the Social Sciences*. New York, NY. Sage.

[Note: referred to as DESS in schedule]

Potter, R. F. & Bolls, P.D. (2012). *Psychophysiological Measurement & Meaning*. New York, NY, Routledge.

[Note: referred to as PMM in schedule]

These are available through your Canvas class page. In the menu at the left of the Canvas page, click on "IU eTexts (Unizin Engage)" to open the Engage reading platform.

In the top right corner of the Engage homepage, click on your initials/photo, then Click on the Help link. Click on "Students" to access quick overviews of how to navigate the platform and all the general studying/learning features – reading, note-taking, highlighting, questioning, printing, bookmarking, searching, and collaborating.

Also, on the Engage homepage you should see the book covers for all the IU etexts your different courses are using this semester. Click on the one for *Media Today* to get started in this course.

Engage works best with Firefox or Chrome.

## **Other Readings**

There will be other readings posted to Canvas for you to read prior to class discussion.

## OTHER IMPORTANT ADMINISTRATIVE INFORMATION

### Disabilities

To request disability accommodations, please contact IU Disabilities Services (855-3508) or visit [their Website](#) for more information.

### Academic Misconduct

All acts of dishonesty in any academic work constitute academic misconduct. This includes, but is not limited to, the following:

***Cheating***-using or attempting to use unauthorized materials, information, or study aids in any academic exercise. This includes purchased notes or materials.

***Plagiarism***-representing the words, ideas, or data of another as one's own in any academic exercise. [How to Recognize Plagiarism](#)

***Fabrication***-unauthorized falsification or invention of any information or citation in an academic exercise.

***Aiding or abetting academic dishonesty***-intentionally or knowingly helping or attempting to help another student commit an act of academic dishonesty.

**Academic Misconduct will not be tolerated in this class.** If misconduct is suspected, Dr. Potter is required to meet with you to discuss it. A summary of the incident, our discussion, any evidence, and a description of the sanction will be sent to the [Office of Student Conduct](#). Consequences may include a grade reduction on your assignment and/or your course grade. You have the right to appeal this sanction and the Office of Student Conduct will inform you of that process.

### Religious Holidays

According to IU policy, accommodations will be made if you need to miss class for observance of a religious holiday. [Find out details here](#).

## **Sexual Misconduct and Title IX**

As your instructor, one of Dr. Potter's responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, you can make an appointment with:

The Sexual Assault Crisis Services (SACS) at (812) 855-8900  
(counseling services)

Confidential Victim Advocates (CVA) at (812) 856-2469  
(advocacy & advice services)

IU Health Center at (812) 855-4011  
(health & medical services)

It is also important that you know that Title IX and University policy require Dr. Potter to share any information brought to his attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available.

Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist.

You are encouraged to visit [stopsexualviolence.iu.edu](http://stopsexualviolence.iu.edu) to learn more.

## **Bias-Based Incident Reporting**

Bias-based incident reports can be made by students, faculty, and staff. Any act of discrimination or harassment based on race, ethnicity, religious affiliation, gender, gender identity, sexual orientation, or disability can be reported through any of the options: 1) email [biasincident@indiana.edu](mailto:biasincident@indiana.edu) or [incident@indiana.edu](mailto:incident@indiana.edu); 2) call the Dean of Students Office at 812-855-8188 or 3) use the IU mobile App (m.iu.edu). Reports can be made anonymously.

## **Health & Welfare**

We all sometimes face challenges in our personal lives, and it is a sign of great personal strength to acknowledge that, and ask for help. You can always go to Indiana University's Counseling & Psychological Services (CAPS) at the Health Center for support (812.855.5711). CAPS can help students on many issues, including depression, anxiety, relationship issues, sexual assault, feelings of inadequacy, substance abuse and difficulty adjusting to life at the university. More information about CAPS is available [here](#).

## **Student Support & Cultural Awareness Centers at Indiana University**

[African American Arts Institute](#). The institute preserves and promotes African American culture through performance, education, creative activity, research, and outreach.

[Asian Cultural Center](#). This center promotes awareness and understanding of Asian and Asian American cultures, histories, and issues through institutional resources, educational support, and community outreach.

[First Nations Educational and Cultural Center](#). This center's mission is to build a Native community within the university, enhance the recognition and reputation of these communities, and provide educational opportunities that further awareness of the First Nations people.

[La Casa Latino Cultural Center](#). This center promotes academic excellence, personal and professional growth, and greater historical, political, and cultural awareness of the Latino community through educational and social programs.

[LGBTQ+ Culture Center](#). The center serves as a resource and information center for the IU LGBTQ+ community and people who want to better understand LGBTQ+ issues and concerns.

[Neal-Marshall Black Cultural Center](#). The center connects IU to Black culture, promotes public awareness of the Black experience, and celebrates students' academic and leadership achievements.

[Center for Veterans and Military Students](#). The center helps veterans and military-connected students make the transition from the military to IU and provides support and resources during their time on campus.

## **Course Tasks**

### **Reading Responses (10% of final grade)**

By 5pm each Monday (starting 8/29) each student needs to submit comments on the readings for the week to me email [USING THIS LINK](#).

Or, perhaps:

Send to [rfpotter@iu.edu](mailto:rfpotter@iu.edu) with the Subject line: Fall 2022\_T602 Response

These are for YOUR benefit and therefore can take a variety of forms: summaries of major points, questions for discussion, points of information/clarification, opinions of the reading in light of other things you have learned/experienced, etc.

### **Exam (20% of final grade)**

On September 21 there will be an *in class, closed note* exam. This will be used to accomplish the first three learning outcomes for the course. You will be able to use a personal computer to type out answer the question prompts, but access to notes/readings/web sources will not be allowed.

### **APA Questions/Exercises (5% of final grade)**

### **Media Lab Exercise (5% of final grade)**

### **ECG/EDA & EMG Team Data Collecting Labs (20% of final grade)**

The class will be randomly divided into lab teams who will collectively practice techniques demonstrated in class. It is highly likely that some data will need to be collected *outside* of class time in the ICR to complete these labs. Given enrollment, there are more teams than labs, which will require some scheduling on your part. Teams will be responsible for figuring this out.

### **Data Processing & Extraction Exercises (20% of final grade)**

These will be individual assignments that students will work on in the ICR outside of class time. The goal will be to practice techniques demonstrated in class.

### **Final Paper (20% of final grade)**

MA and PhD students must submit a research proposal that presents a review of the literature in a specific area, leads to at least two hypotheses that can be addressed (in part) by psychophysiological measures discussed in class, and describes stimuli/procedures/etc. MS students can do a research proposal if they wish, but they can also write a final paper that applies peer-reviewed, published psychophysiological research to a topic area of interest (Documentary Production, Journalism, Data Journalism, Management, Strategic Communication).

### Tentative Course Schedule

Date	Read Before Class	Lecture Topics In-Class Activities	To Do This Week After Class
Aug. 24	DESS 1, 3-4	Welcome Introductions Experimental Design Part 1	APA 1 exercise
Aug. 31	DESS 5-6 PMM 1-2	Experimental Design Part 2  History of biological measures in communications research  Assumptions of Psychophysiology	APA 2 (pg 29-46) exercise
Sept. 7	DES 10-11  Potter, Ni, & Marlet (working paper)	A quick intro to measures and how they have been used to advance theory	Complete CITI certification
Sept. 14	PMM 3 Peer reviews  Optional: Jennings & Allen (2017)	The signal chain Basic vocabulary of psychophysiology	--
Sept. 21	Review your readings for exam preparation	In class exam	APA 12 exercise
Sept. 28	Media Lab Manual	Media Lab Demonstration	APA 2 (pg. 47-67) exercise  Work on Media Lab Exercise (due Oct. 12)



<b>Date</b>	<b>Read Before Class</b>	<b>Lecture Topics In-Class Activities</b>	<b>To Do This Week</b>
Oct. 5	Wise (2018)  Optional: Berntsen et al. (2017)	The basics of the cardiovascular system and how to measure it	APA 4 exercise  Work on Media Lab Exercise (due Oct. 12)
Oct. 12	PMM Chapter 4	ECG data collection demonstration	APA 5 exercise  Complete ECG team data collection
Oct. 19	Clayton et al. (2017)	Discuss Clayton et al.  ECG Cleaning & Extraction demonstration	APA 3 (pg. 71-81) exercise  Complete ECG data extraction
Oct. 26	Bailey (2018) Read (2018)  Optional: Dawson et al. (2017) Tassinari & Cacioppo	The basics of electrodermal and electromyographic systems and how to measure them	APA 3 (82-108) exercise  Submit paper idea for feedback
Nov. 2	PMM Chapter 5	EDA/fEMG data collection demonstration	APA 8 exercise Complete EDA/fEMG team data collection
Nov. 9	Lee & Potter (2018)	Discuss Lee & Potter	APA 9 exercise
Nov. 16	Cummins (2018)  iMotions guide on Automated Facial Coding	EDA/fEMG Cleaning & Extraction demonstration  The basics of eyetracking	Work on term paper  Complete EDA/fEMG data extraction
Nov. 23	Thanksgiving	Thanksgiving	Thanksgiving

Nov. 30	van der Zaden et al. (2021)	Discuss van der Zaden et al. (2021)  Eye tracking demonstration	Work on term paper  Complete EDA/fEMG data extraction
Dec. 7	--	One-on-One term paper discussions by appointment	Work on term paper