

# **ALEXANDER DALE - Health and Psychophysiology (Psych 360)**

Fall 2004

MW @ 11:00am in Carnegie 107 with Thurs. labs 1:30pm or 3:00 in Carnegie 06 & 4H

Office Hours-Office Hours-2:30-3:30 MW, 10-11M TWF, with others available by appointment -please call 2392, email adale or drop by Carnegie #09

Note: The Psychology Department received grants from the National Science Foundation (ILL), Allegheny College, Dataq, Inc. and the Keck Foundation to develop the labs for this course.

Please select either the 1:30 Thursday Lab or 3:00 Thursday lab. Lab attendance is mandatory. Lab sections will be assigned on a first come -first served basis. Due to an error in the registration process this was not available for pre-registration. Please accept my apologies for not catching that. This year I am asking students to register for a 590 2 credit course for the laboratories so that the course has 4 credits and the lab has an additional 2 credits.

Please select 3 topics to serve on 3 discussions throughout the term. There will be a maximum of three students on each topic and topics will be awarded on a first-come, first-served basis. You will each serve on a panel that will discuss the topic for the day and present a technique using the telemetry equipment, if possible (if not, please use web data to demonstrate the measure being discussed) . Please make certain that you select at least one topic before midterm.

Please select one of your 3 topics to prepare for a paper as well. For your paper please design a new experiment appropriate to your topic with appropriate references from the literature. Please keep in mind available equipment and software and consult with your instructor about your project.

Your final grade in Psych 360 will be determined by performance in presentations(1/3), participation(1/3) in class and performance on tests and paper(1/3).

Your final grade in the lab section (Psych 590 -- 2 credits) will come from participation in lab (50% from lab reports, 25% lab practical evaluation, and 25% from general participation). Lab reports will be due in pairs the lab after every second lab.

TEXT: John L. Andreassi (2000). Psychophysiology Human Behavior & Physiological Response. Mahwah, New Jersey: Lawrence Erlbaum Associates. Plus the possibility of additional articles TBA

08/26 Lab cancelled due to registration error

08/30 An Historical Introduction –Andreassi(2000)-pp1-10  
Presenter - A.Dale

09/01 Physiology and Behavior& scheduling of presentations –A-pp12-25  
Presenter - A.Dale

09/02 Lab One: An Introduction to the Lab and the Electroencephalogram

09/06 Psychophysiology of the normal nervous system- A. pp25-84  
-waking and sleeping EEG and EEG biofeedback  
-hemisphericity  
-Presenter: A. Dale

09/08 Applied EEG: 1.The Psychology of Sleep Pathology with the Polysomnogram – A-pp85-158  
2. EEG Event Related potentials and attention  
3. A new polygram? -hypnosis?  
-Presenters: Chris W., Bethany S., & Chiko P.

09/09Lab Two: The Electroencephalogram, Alpha Blocking and States of Consciousness

09/13 The Psychology of Aberrant EEG---epilepsy, brain damage and -EEG biofeedback  
-thought translation --A.pp 344-358  
-Presenters: Adrian O., Cara G.,& Tricia C.

09/15 Emotionality and Psychopathology in EEG scans vs. MRI, CAT and PET scans –  
outside sources  
-Presenters: Steven L., Stacey M.

09/16Lab Three: Laterality of Function and EEG Alpha. Lab reports 1 & 2 due.

09/20 Muscle Tension Problems and the Electromyogram –A. -pp164-187  
-Presenters: -Alexis M., Mark N. & Ellen S.

09/22 Relaxation Training and Health (Biofeedback) – A. 365-376  
-headaches, repetitive strain, psychosomatic problems and anxiety  
-Presenters: Sarah M., Hlengiwe M., & Nana S.

09/23 Lab Four: The Electromyograph and Relaxation and Biofeedback

09/27 Treatment of paralysis (due to insensitivity) using EMG biofeedback --outside sources  
-Presenter: Sarah P. Amanda M.

09/29 Emotionality, Thinking and Facial EMG, A-.pp-330-336, 249-254 and outside sources  
-the detection of deception by facial expression (see Ekman & Frieson, Telling Lies)  
-the startle response  
-Presenters:- Kelly S., Bethany S.

09/30 Lab Five: EMG II, Facial analysis- Labs 3 & 4 due

10/04 Electrodermal Activity and Behavior – A. pp191-215, 380-381  
-therapy, affect, deception, & reaction  
-Presenters: A. Dale

10/06 Test 1 (material to date) -Sample

10/07 Lab Six: Electrodermal Activity and Stress

10/11 Fall Break

10/13 The Orienting and Defense Responses and EDA –A. pp. 207-210  
-Presenters: Ellen S, Hlengiwe M., & Nana S

10/14 Lab Seven: The Detection of Deception --Labs 5 & 6 due

10/18 Affect and Imagery in Pupilometry A. pp. 218-230.  
-Presenters: Mark N. & Lauren T.

10/20 Dreaming, Perception, Reading and Psychopathology with the Electrooculogram  
A. pp. 234-254.  
-Presenters: Alexis M., Sarah P., & Kelly S.

10/21 Lab Eight: Electrooculogram and Reading

10/25 Emotionality, Orienting and Electrocardiogram- A. pp. 257-297  
-Presenters: Steven L., Hlengiwe M., & Nana S.

10/27 The Psychology of Coronary Proneness -Type A or Hostility? Heart Rate and Stress Testing.- A. 286-287 & outside sources  
-Presenters: Chris W. Chiko P. & Sarah M.

10/28 Lab Nine: Cardiovascular Assessment of Exercise and Internal vs. External Attention- Labs 7& 8 due

11/01 The Psychology of High Blood Pressure -Sphygmomanometry -impedance cardiography  
-Presenters: Stacey M., Mark N. ,& Lauren T.. 301-326

11/03 The Psychology of Angina Pain -outside sources  
-Presenters: Adrian O., Alexis M. & Cara G.

11/04 Lab Ten: Digit Temperature and Imagery

11/08 Cardiographic detection of deception - Pulse pressure measurements –A. pp330-340  
-Presenters: A. Dale

11/10 TEST II (material to date) -sample

11/11 Lab Eleven: Respiration (Hyperventilation and EKG, pulse O2 and vital capacity) Labs ( 9 & 10 due)

11/15 The Psychology of Migraines, Raynaud and Reflex Sympathetic Dystrophy - Dilatation, dopplers and digits  
-Presenters: Tricia C., Sara P. & Kelly S. 384-386-outside sources

11/17 The Psychology of Hyperventilation and Apnea--Respiration measures- thermocouple vs. bellows –outside sources  
-Presenters: Adrian O., Cara G., & Bethany S.

11/18 Lab Twelve Electrogastragram and Visual Disorientation

11/18 **\*\*Draft of Paper Due\*\***(Please make note to use the format designated in the Psychology Department Handbook. Of particular importance is the section on Plagiarism and the Honor Code. The Handbook compiled by Drs. Anderson and Hudak, is available on the Psychology website (<http://webpub.alleg.edu/dept/psych/Writing.html>) - References to newspaper, popular magazines, unevaluated webpages and dictionaries will be penalized-see <http://psych.hanover.edu/Krantz/journal.html> or <http://library.allegheny.edu/Reference/psychology.htm> or <http://www.psych-central.com/>

for reviewed journals on the web)-35% of final paper grade. The paper should be a research proposal with an extensive introduction based on one of your presentations or a negotiated topic (8-12 pages approx.).

11/22 Gastric Psychophysiology -Presenters: Chiko P., Bethany S., & Ellen Smith – outside sources

11/24-28 Thanksgiving Break

11/29 The Psychology of Pain and the Role of Psychophysiology –outside sources  
-Presenters: Chris W., Sarah M., Amanda M., & Steven L.

12/01\*\*\*\*Final Papers Due\*\*\*\*

12/01 Psychology of the Immune System - Salivary and Plasma Measures of Immunocompetence –outside sources

Presenters Tricia C., Stacy M., & Lauren T. , TBA-Labs 12 & 13 due

12/02 Lab Practicum Exam Practice for final exam

12/06 Activation, Stimulus and Response Specificity and the Law of Initial Values – pp. 396-417

Presenter: A. Dale

12/10 The Future of Health and Psychophysiology-

Presenter- A. Dale

FINAL EXAM Wed. Dec 15th @ 9:00am - complete the text and material above (including labs- practical evaluation will be included -see 12/02) -Sample