



SYLLABUS

INDIVIDUAL DIFFERENCES **Professor Yulia Kovas**

Contact Hours: 40
Language of Instruction: English

LONDON, ENGLAND

COURSE DESCRIPTION

This module provides an overview of psychology as it strives to explain how and why people differ, and what implications these differences have. We will examine how important life outcomes, such as health, academic and occupational success, and wellbeing are linked to individual differences in cognition, personality, and motivation. The course will introduce the latest scientific findings on the origins of individual differences, focusing on interactive systems of genetic, epigenetic, societal and circumstantial factors, and related psychological processes. An important component of the course will be the study of causative mechanisms. Critical evaluation of the existing research, including major misunderstandings surrounding the differences between individual and average differences, will be a major focus of the course.

COURSE OBJECTIVES

The main objective of the course is to introduce the latest scientific knowledge on individual differences in psychological processes and their links to important life outcomes.

The course is designed to consolidate and expand existing knowledge in psychology, and to develop deeper understanding of the causes of individual differences; research approaches in this field; and practical implications of the research.

Intended Learning Outcomes

Students should be able to:

1. Evaluate the current state of the research in individual differences
2. Critically evaluate methods and procedures used in the individual differences research
3. Understand the complexity of determining causative mechanisms involved in individual variation
4. Define what is meant by etiology of individual differences at biological, cognitive, and psychological levels
5. Understand and apply the concept of Effect size to the analysis of individual and group differences
6. Analyze ethical issues and controversies associated with research in individual differences
7. Communicate knowledge and understanding of the main issues orally and in written form

INSTRUCTIONAL METHODOLOGY

The sessions combine introductory lectures, student presentations, discussions and group work. Students will be expected to actively prepare for all classes. The classes are highly participative and interactive. **3-4 sessions are planned with participation of invited speakers.** If organizationally possible, we will hold a session, inviting PhD and other students from Goldsmiths – involved in the relevant research – for discussions and potential collaborations.

COURSE READING

Course Text book:

The Wiley-Blackwell handbook of individual differences. Book by Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

RECOMMENDED TEXTS

- Personality and individual differences. Book by Tomas Chamorro-Premuzic; British Psychological Society (2011 OR Other editions).
- Journal Articles
- Encyclopedia on Early Childhood Development: <http://www.child-encyclopedia.com/>

METHOD OF EVALUATION (GRADING)

The course will be evaluated on the following 4 assessments:

1. Short Test (20% of the grade). Students will be asked to provide short explanations for 10 concepts covered in the 2 introductory sessions. The 10 concepts will be chosen from a list of 30 concepts that students will be required to revise. The test will take place in Week 5 and will last for 45 minutes.
2. Oral Presentation (20% of the grade). Students will prepare and submit a 10 minute podcast OR deliver a 10-minute presentation in class - linked to one of the course topics. The presentation material should go beyond suggested reading for that session

to include students' literature search and analysis. Presentations will be given in weeks 4-9. Podcasts must be submitted by Session 8.

3. Group Project (20% of the grade): Students will work in small groups to review and critically evaluate existing research on a particular topic (e.g. individual differences in creativity). They will prepare a summary of this evaluation – in a form of a brief presentation (10 minutes), which will be delivered by the group. Different students from each group will comment on research questions, methodology, results, effect sizes, limitations of the research, as well as general conclusions from the reviewed body of research. An example of a topic to research is: Does intelligence predict important life outcomes? The group presentation will be held in Week 9.
4. Class Participation (40% of the grade). Students will be assessed on four types of activity in class: asking questions following presentations (10%); engaging in discussions based on preparation/recommended reading (10%); answering questions (10%); taking an active role during the group activities (10%).

COURSE SCHEDULE

March 30-June 5

Week One

Topic: Introducing individual differences. How we measure and study individual differences. The extent of individual differences in different human traits.

Textbook Reading:

- William Revelle, Joshua Wilt, David M. Condon (2011). Individual Differences and Differential Psychology. Chapter 1 (pages 1-38) in The Wiley-Blackwell handbook of individual differences. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Supplementary Reading:

- William Revelle, David M. Condon, Joshua Wilt (2011). Methodological Advances in Differential Psychology (Chapter 2, Pages: 39-73) in The Wiley-Blackwell handbook of individual differences. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Due:

- Prepare for the Session by reading the recommended reading.

Week Two

Topic: Etiology: biological, sociological, cultural and other sources of individual differences.

Textbook Reading:

- Plomin, R., DeFries J.C., Knopik V.S., Neiderhiser, J.M. (2016). Top 10 Replicated Findings From Behavioral Genetics. *Perspect Psychol Sci.*, 11(1):3-23. doi: 10.1177/1745691615617439.

Supplementary Reading:

- <http://www.child-encyclopedia.com/behaviour>
- <http://www.child-encyclopedia.com/epigenetics> (explore the topic, including articles by the experts)

- <http://www.child-encyclopedia.com/brain> (explore the topic, including articles by the experts)
- <http://match.ctglab.nl/#/home> (explore this interactive site; how heritable are individual differences in different traits)?

Due:

- Prepare for the Session by reading the recommended reading.

Week Three

Topic: Individual differences in Cognitive abilities

Textbook Reading:

- Charlie L. Reeve, Silvia Bonaccio (2011). The Nature and Structure of “Intelligence” (Chapter 7, pages 187-216) in The Wiley-Blackwell handbook of individual differences. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Supplementary Reading:

- Plomin, R. & Deary, I. (2014). Genetics and Intelligence Differences: five special findings. *Molecular Psychiatry*, 20, 98-108.
- Talk by Professor Seth Grant: <https://www.youtube.com/watch?v=W3yCQyD5Dvg>
- Talk by Professor Douglas Detterman: <https://www.youtube.com/watch?v=UF72oeDwbQU>
- Cognitive Epidemiology: https://en.wikipedia.org/wiki/Cognitive_epidemiology
- Tom Clynes (2016). How to raise a genius: lessons from a 45-year study of super-smart children. And further reading on Study of Mathematically Precocious Youth (SMPY).

Due:

- Prepare for the Session by reading the recommended reading.

Week Four

Topic: Individual Differences in Personality

Textbook Reading:

- Jaap J. A. Denissen, Marcel A. G. van Aken, Brent W. Roberts (2011). Personality Development across the Life Span (Chapter 3, Pages: 75-100) in The Wiley-Blackwell handbook of individual differences. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Supplementary Reading:

- Harold, G. T., Elam, K. K., Lewis, G., Rice, F., & Thapar, A. (2012). Interparental Conflict, Parent Psychopathology, Hostile Parenting, and Child Antisocial Behavior: Examining the Role of Maternal Versus Paternal Influences Using a Novel Genetically Sensitive Research Design. *Development and Psychopathology*, 24(4), 1283 - 1295.

Due:

- Prepare for the Session by reading the recommended reading.
- Oral Presentations/Podcasts:

Topic 1: Epigenetics and Individual Differences

Topic 2: Links between cognitive abilities and health, academic success and longevity

Topic 3: How early do individual differences emerge in temperament/personality?

Topic 4: How does personality develop across the life span?

Topic 5: What are the sources of individual differences in personality?

Week Five

Topic: Individual differences in Motivation

Textbook Reading:

- Gary P. Latham, Deshani B. Ganegoda, Edwin A. Locke (2011). Goal-Setting: A State Theory, but Related to Traits (Chapter 21, pages: 577-587) in *The Wiley-Blackwell handbook of individual differences*. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).
- Adrian Furnham (2011). Personality and Approaches to Learning (Chapter 22, pages: 588-607). in *The Wiley-Blackwell handbook of individual differences*. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).
- Patrick Ian Armstrong, Rong Su, James Rounds (2011). Vocational Interests: The Road Less Traveled (Chapter 23, pages: 608-631).

Supplementary Reading:

- Garon et al., (2016). Intrinsic Motivation and Achievement in Mathematics in Elementary School: A Longitudinal Investigation of Their Association. *Child Development*, Volume 87, Number 1, Pages 165–175.
- Malanchini, M., Wang, Z., Voronin, I., Schenker, V. J., Plomin, R., Petrill, S.A., & Kovas, Y. (2017). Reading Self-Perceived Ability, Enjoyment and Achievement: A Genetically Informative Study of Their Reciprocal Links over Time. *Developmental Psychology*, 53(4), 698-712.

Due:

- Prepare for the Session by reading the recommended reading.
- Short Test in class
- Oral Presentations/Podcasts

Topic 1: Will a robot take your job?

Topic 2: Is motivation a good predictor of academic an occupational success?

Topic 3: What is effect size in the study of individual and group differences? (use comparing effect sizes tool: https://www.psychometrica.de/effect_size.html)

Topic 4: tbc

Topic 5: tbc

Week Six

Topic: Individual differences in Mental health and Wellbeing.

Textbook Reading:

- Vincent Egan (2011). Individual Differences and Antisocial Behavior (Chapter 19, pages, 512-537) in *The Wiley-Blackwell handbook of individual differences*. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Supplementary Reading:

- <http://www.child-encyclopedia.com/anxiety-and-depression> (explore the topic, including articles by the experts)

- <http://www.child-encyclopedia.com/mental-health> (explore the topic, including articles by the experts)

Due:

- Prepare for the Session by reading the recommended reading.
- Oral Presentations/Podcasts

Topic 1: Mental Health in children.

Topic 2: Individual differences and diagnoses

Topic 3: tbc

Topic 4: tbc

Week Seven

Topic: Creativity

Textbook Reading:

- James C. Kaufman (2011). Individual Differences in Creativity (Chapter 26, pages 679-697) in The Wiley-Blackwell handbook of individual differences. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Supplementary Reading:

- Gajda, Karwowski, & Beghetto (2016). Creativity and academic achievement: A meta-analysis. Journal of Educational Psychology, Vol 109(2), 269-299.

Due:

- Prepare for the Session by reading the recommended reading.
- Oral Presentations/Podcasts

Topic 1: Can Robots be creative?

Topic 2: Can everyone be creative?

Topic 3: Can we develop creativity in children?

Topic 4: What is creativity?

Topic 5: tbc

Week Eight

Topic: Systems: interrelations across cognition, personality and other human traits

Textbook Reading:

- Margaret L. Kern, Howard S. Friedman (2011). Personality and Differences in Health and Longevity (Chapter 17, pages 461-489). in The Wiley-Blackwell handbook of individual differences. Eds. Tomas Chamorro-Premuzic; Sophie Von Stumm; Adrian Furnham (2011).

Supplementary Reading: tba

Due:

- Prepare for the Session by reading the recommended reading.
- Podcast submission
- Oral Presentations/Podcasts

Topic 1: What is gender equality paradox?

Topic 2: What are the links between personality and cognition?

Week Nine

Topic: Controversies

Textbook Reading: tba

Supplementary Reading:

- Selita, F. & Kovas, Y. (2018). Genes and Gini: What inequality means for heritability. *Journal of Biosocial Science*, 1 - 30, doi:10.1017/S0021932017000645
- Toivainen, T., Pannini, G., Papageorgiou, K.A., Malanchini, M., Rimfeld, K., Shakeshaft, N., & Kovas, Y. (2018). Prenatal testosterone does not explain sex differences in spatial ability. *Scientific Reports*, 12:8(1):13653. doi: 10.1038/s41598-018-31704-y.
- Gijsbert Stoet & David C. Geary (2018). The gender equality paradox in STEM education. *Psychological Science*, 29 (4): 581–593, doi:10.1177/0956797617741719 https://en.wikipedia.org/wiki/Gender-equality_paradox

Due:

- Prepare for the Session by reading the recommended reading.
- Group Presentations

Week Ten:

Topic: General summary and revision

Textbook Reading:

- revising recommended material

Supplementary Reading:

- course slides and notes

Due:

- Revising material from the whole course in preparation for class discussion and exercises.
- Group Tasks; Discussion; Exercises – final class participation assessment.