

Creativity Brain & Self Draft syllabus



Semester & Location:	Summer 2020– DIS Copenhagen
Type & Credits:	Summer Course - 3 credits
Major Disciplines:	Neuroscience, Psychology
Faculty Members:	Carla Caetano
Program Director:	Lars Rossen
Time & Place	Times: Typically 9-12 am Tuesday May 26 th to Thursday 11th June Place: TBA



Description of Course

Prerequisite: One semester of neuroscience, physiological psychology, or biological psychology at university level

How can we understand creativity in relation to brain functioning and the individual? Does our personality make a difference? What happens to creativity and the aging brain? This course explores creativity with reference to brain related structures and functions, cognitive processes and individual differences. You will consider diverse forms of creativity within the domains of, for e.g., the visual arts, music, literature, etc. You will critically engage

yourself in this topic by understanding the challenges of measuring creativity, from diverse approaches such as the neuroscientific, cognitive processing, and personality perspectives. Research will inform application and future directions.

Learning Objectives

By the end of this course, students should be able to:

- Describe creativity from diverse perspectives
- Compare and contrast the domains of creativity
- Critically analyze creativity in relation to cognitive neuroscience
- Critically analyze the assessment of creativity
- Evaluate the self in relation to creativity from a lifespan perspective
- Present, discuss and criticize scientific papers in the field

Faculty

Carla Caetano, Ph.D. Senior Consultant in Research Development (August, 2019), Program Director of Psychology and Cognitive Neurosciences Department. Ph.D. (Psychology and Cognitive Neuroscience 2012-July, 2019) Fuller Graduate School of Psychology Pasadena, CA.(1992). Post Doctorate (Adult Neuropsychology), UCLA/Cedar Sinai Medical Center, Los Angeles CA. (2000-2002). Licensed Psychologist (2002, California, USA), Specialist & Supervisor in Clinical Neuropsychology (Denmark). With DIS 1999-2000 and since 2003.

Examples of Readings:

Selected readings from textbook:

Abraham, Anna (2018) *The Neuroscience of Creativity*. Cambridge University Press.

Other Books: (selected chapters)

R. E. Jung & O. Vartanian (Eds). (2018) *The Cambridge Handbook of The Neuroscience of Creativity*. Cambridge: Cambridge University Press.

Articles (Examples)

Beaty et al. (2018). Robust prediction of individual creative ability from functional connectivity. *PNAS*. Vol.115. No.5. 1087-1092.

Runco MA, Acar S (2012) Divergent thinking as an indicator of creative potential. *Creativity Research Journal*. 24 (1). Pp. 66–75.

Puryear, J.S & Kettler, T. (2017) Relating Personality and Creativity: Considering What and How We Measure. *The Journal of Creative Behavior*, Vol. 53 (2) pp. 232-245

Possible Field Studies

- 1) Art Therapy in practice
- 2) Improvisation

Approach to teaching

As this class addresses creativity, hopefully we will develop a creative and dynamic environment for learning! I am open to working with students to create such an environment, so focus in this class is on interactive, collaborative learning. Students will be allocated to leadership teams to help with preparation for the class, and also to aid in discussion and critical analysis. The classes will typically consist of diverse formats consisting of, for

example, short lectures, team discussions, flipped classroom preparation (e.g, video reviews) and analysis of research .

Expectations of the students

Creativity and Cognitive Neuroscience is a wonderful, complex field that requires us to think creatively! Class participation is important because as we will be working together to understand and develop insights into the material we encounter. It also helps us to share experiences and information and to explore questions associated with our topics.

As such, I expect students to have done the readings for each class and want to encourage each and every student to contribute in every class session even though I recognize that students vary in how comfortable they are speaking in class. Hopefully, we will create a classroom environment that is inclusive, supportive, and encouraging of curiosity and creativity!

Class attendance is mandatory and students are expected to be punctual. Students must inform the instructor if they will be missing class prior to the start of class. Except for documented illness, absences will be considered unexcused absences and will affect the student's participation grade.

Use of cell phones/ laptops to be used ONLY for class related activities (this is part of showing respect and attentiveness to one another) Failure to do so will affect participation grade.

Assignments: it is expected that students hand in their assignments on time and late papers will not be accepted except for instances of documented illness.

Workload

This course is an intensive course. In just three weeks, you will cover an extensive content and receive three credits. In order to merit this you should expect a high workload and intensive preparation for classes on a daily basis.

Evaluation: Assignments and Grading

Grading

Assignment	Percent
Active Class Participation	15%
Research Teams: Preparation & leadership	25%
Quiz 1	15%
Quiz 2	15%
Final Research Paper	30%
Total	100%

Detailed assignment description and rubrics will be available via Canvas and in-class

Assignment Description

Active class participation (15%):

The student is active in discussions and group work. Active participation and engagement includes asking questions related to readings and material presented in the class and taking part in discussions as well as being active during field trips, study tours and guest lectures. Active participation also means taking the initiative. The

grade is split into active participation in class and in field studies. Class attendance is mandatory and will be reflected in this assignment grade. See Canvas for class participation grading.

2 Quizzes (15% each – Total 30%)

Short answered questions (between 7 and 10) and two short essays. Short answer questions will be a combination of information recall and explanation of concepts and theory. Short essays will summarize knowledge on a specific topic covered in class and will require integration of class content.

Research Leadership Team Assignment (25%)

Date: Variable across groups

Team Leaders Responsibilities:

Summary Overview Handout: Team responsible will provide overview as handout max. 1 day prior to instructor which will consist of: Background, Anatomical considerations, Creativity approach, Purpose, Design, Sample, Findings, Future considerations.

Acting as Consultants: The Team responsible will review elements of handout with the class (in mixed teams) when relevant by acting as “experts/consultants ” within the other teams and will keep the overview, facilitate inclusion/elaboration of key areas/dilemmas: *Note: This will be graded by taking into account Peer Evaluation - and counts as part of participation grade*

Concluding Summary. Based on Plenum discussion and own analysis, team Leaders will summarize discussion points and conclusions reached as regards “ future research considerations and rationale”, identifying what is the most feasible and why. These must be sent to instructor by midnight no later than one day subsequent to class

Final Research Paper: (30%)

This 7 page paper (excluding cover page and references) will address current issues in creativity based on a selected topic from this course. Present issues pertaining to the topic as a question or questions you would like to answer. The introductory first page of the paper should refer to personal reflections of the course the rationale for the topic being chosen.

Supporting literature should critically analyze your topic, for e.g., how the selected literature provide similarities/ differences/ additional perspectives. The literature selected should be used to argue for/against issues selected and elaborate on subtleties and complexities pertaining to the topic, including unanswered questions. A total of min. 6 references should be given. Website references will not be accepted (unless given to demonstrate an example). Primary literature is expected (e.g., books dedicated specifically to subject matter being explored and research articles). Research articles should consist of a minimum of 3 primary research while others can be review research articles (preferably systematic reviews)

After the reflective introduction, the paper should be analytic rather than descriptive in focus and should conclude with implications of the findings as regards research, practical application, and future directions

Course Topics:

Dates:

This course will run from Tuesday, May 26th to Thursday, 11th June

Topics will be distributed between these days

Typically: 11 classes (3 hours each) 2 field studies (3 hours each)

Theme 1: Definition of Creativity

Example of Topics:

Models of Creativity
Domains of Creativity

Theme 2: Understanding Creativity from a Cognitive Neuroscience perspective

Example of Topics:

Creative cognition
The role of neuroscience
Critical Analysis of scientific papers – Team 1

Theme 3: Assessment of Creativity

Example of Topics:

Level of Analysis & assessment approaches
Cognitive Approach & assessment techniques
Neuroscience Approach & assessment techniques
Critical Analysis of scientific papers – Team 2

Theme 4: The self and personality from a lifespan perspective

Example of Topics:

How do we define the self and in relation to creativity
How do we define personality and in relation to creativity
Creativity, the individual and lifespan
Critical Analysis of scientific papers- Team 3

Conclusions and Future Directions