

Inside 21st Century Creativity EDHD 231 Spring 2019



Tuesday and Thursday 11:00 AM-12:15PM
Location Benjamin 3315
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Office hour: Tuesday 10:00 am or by appointment
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We live in a world of limitless creativity: Music, Science, Art, & digital devices are central to contemporary creativity and its development. Creativity is a key component of our world and the problems that the world faces are dependent on creativity. What underlies these vastly different aspects of the creative mind and creativity in a socially networked world? In a highly interactive, inter-disciplinary and multimedia manner we will examine the nature of the creative mind, culture, and

creative contexts from multiple perspectives. We will consider the psychological, social, sociological, developmental, cultural, computational, educational, genetic and neural roots of creativity. We ask what are the factors and mechanisms underlying creativity and whether 21st century creativity is different from creativity in other eras. How can we educate the creative mind? Finally, what is the role of social media, digital devices, and even theft in 21st century creativity. More specifically, we will address the following questions:

Course objectives. EDHD231 students will demonstrate:

1. An understanding of both the nature and breadth of creativity. The focus will be on the underlying mechanisms of the creative process across multiple contexts and domains;
2. An understanding of both the history of creativity research and how this relates to theories of cognitive, social and cultural dimensions of creativity as well as the ways that creativity has been measured;
3. Understanding of the roles of biological processes in creative thought, including brain based mechanisms that influence creativity and genetic and neurochemical factors influencing creativity;
4. Understanding of the different forms that creativity takes in different domains, such as music, the visual arts, performing arts, and different sciences;
5. Understanding of the concept of “malevolent creativity,” where creativity is used to do harm. How to prevent this from happening and determine whether “creativity gone bad” taps a different form of creative imagination;
6. Understanding of ways in which creativity can be enhanced: Educational, pharmaceutical, social & genetic engineering have all been used to enhance creativity; do they work and do we want them?
7. An ability to think critically, write & present briefly and distill concepts in a clear manner and find new information that exemplifies the ideas and concepts underlying creativity.

Course Structure

Two classes per week, involving lectures, class discussions, demonstrations, and in-class activities. Lecture slides will also be posted on Canvas *after* each Thursday's class. Starting in week 3, Feb 12, *Tuesday classes will be student designed and led*. Thursday classes will be led by the Professor. Class starts promptly. Be on time. Stay for the entire class. At the end of Tuesday's class, starting on week 3, students will write a brief online, reflection of the readings for the week. This will be done in class on Canvas during the last 15 minutes of the class and submitted in class. A rubric will be posted next week.

Evaluation; six components

(1) Two group Presentations (20%) MGSE. Each of the two presentations is worth 10%. Thus, presentations are worth 20% of the final grade. The group presentation grades are based on the content, creativity, clarity and persuasiveness of the presentation. Presentations should include student engagement and participation. **Try not to use Powerpoint or youtube**, but you can generate quizzes (no Kahoot!), have debates. Stimulate discussion of the themes. Content, Group Activities, Engagement and originality will be graded.

(2) Midterm Examination (20%) MGSE. This will be an in class combination of short answer and multiple choice questions concerning the foundations of creativity. These concepts form the underlying framework for understanding creativity in this course.

(3) Final Examination Essay proposal (5%) MGSE. This will be Due on April 8, submitted through ELMS. The proposal will be one paragraph (roughly 8 to 10 lines).

(4) Final Examination Essay (25%) MGSE. The final examination in this course is an essay that will be about a key topic in creativity that you propose relevant to the course. Pick a topic of your own choice: The topic must be about a particular type of creativity, underlying processes of creativity, or an issue in contemporary creativity. You can also write on a topic covered in the course, but in a more in-depth way bringing in materials from outside the course. Due on Canvas anytime between May 3rd and May 16th. The essay itself should be 8 pages (minimum) up to 9 pages (maximum) double-spaced. The page count excludes the reference page(s) and cover page. The essay should be submitted in a modified APA format. All this will be explained in great detail during the course and will be explained to you in a special class. Writing style and the structure of your arguments will be graded. The essay must be submitted via Canvas no later than May 16.

(5) In Class Oral Participation (10%). This will be based on participation in the class discussions and activities. Note that for participation to occur you must be there! Attendance is mandatory.

(6) In Class Digital participation (20%). Here you provide a very brief summary/reflections into the issues of that week on ELMS. Weekly in class reactions using Canvas. Starting Week 4 you will write a brief, up to 150 word reflection, integrating the themes of the week into a few points out paragraph. Some Examples will be posted during week 2 to get you started. This will be done in class on Canvas at the end of the February 7th class.

Class Policies

A guide to University policies regarding all undergraduate education can be retrieved at <https://www.ugst.umd.edu/courserelatedpolicies.html>. This guide provides you with resources and information relevant to your participation in any UMD course, whereas this syllabus provides additional information regarding expectations and resources that are specific to EDHD231.



Attendance, Climate & Electronics Policy Students are expected to attend and actively participate in each class except in the case of illness or other extenuating circumstance. If missing class, students are responsible for obtaining additional notes from a classmate. Arrive on time and leave on time. Missed classes due to illness or university activities must be officially documented. Each class needs to start on time. Be respectful of your fellow students and be punctual. Do not leave early as the end of class is often devoted to Digital Participation. Once class begins, students are expected to conduct themselves

professionally. Cell phones must be turned off and put away during class unless there is an extenuating circumstance or your phone is needed for a class activity. Laptops and tablets are permitted during class but should only be used for accomplishing class objectives such as taking notes or for discussion activities. Students who disregard this policy will be asked to put away their devices and leave the class immediately resulting in an automatic zero for the in-class activity for that day. If this becomes a persistent issue in the class, then a no-technology policy will be instituted. As per university policy, MGSE (Major Scheduled Grading Events) assignments or assessments require written documentation of a University approved excuse for missing or being late with the assignment.

Academic Integrity: The University of Maryland, College Park has a student-administered Honor Code and Honor Pledge. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <https://www.studentconduct.umd.edu>. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. The code prohibits students from cheating, fabrication, facilitating academic dishonesty, and plagiarism. Instances of this include submitting someone else's work as your own, submitting your own work completed for another class without permission, or failing to properly cite information other than your own (found in journals, books, online, or otherwise). Any form of academic dishonesty will not be tolerated, and any sign of academic dishonesty will be reported to the appropriate University officials.

Spring 2019; Inside 21st Century Creativity Schedule & Readings

Week 1, January 29, 31: Introduction to the Course & overview of presentations & Grading

- A. Lehrer, J. (2012). Introduction to Imagine: How Creativity works. Pages i-xx. Houghton Mifflin Harcourt. New York, NY.
- B. Rothman, J. (2014). Creativity Creep. The New Yorker September 2. <http://www.newyorker.com/books/joshua-rothman/creativity-creep>

Week 2, Feb 5, & 7: Understanding the process and products of Creativity

- A: Weisberg, R. E. (2010) The study of creativity: from genius to cognitive science. *International Journal of Cultural Policy*, 16, 235–253.
- B: Indurkha, B., & Ogawa, S. (2012). Mechanisms of Creativity in Visual Arts. *Proceedings of the Cognitive Science Society* 34, 1727-1732.

Week 3, Feb 12 & 14, **Animal Creativity & The Evolution of Creativity Presentations 1a Feb 12**

Povinelli, D. (2013). Is the Human Mind Unique. Animal Creativity. Video posted on canvas . Originally at <https://www.youtube.com/watch?v=kX49dlbfG9E>

FEB 12 Extra Credit Animal Creativity Found objects, Ten 5 minute Presentations by groups

Watch the posted Povinelli video on animal creativity. Also, find something that was created by an animal that you think is creative. Bring a picture or video of animal creativity to class on Tuesday. Then, in your group, discuss, whether and why the "artifact" is creative, especially in terms of the criteria that were used in the readings for weeks one and two. Your group should discuss the artifacts brought by the group members and decide which one is the most creative and why. Then, your group should select the "best" artifact and present the artifact to the class and the criteria that your group used to select that particular object

FEB14: Evolution of Creativity

Pringle, H. (2013) The origins of creativity. Scientific American, March 201, pages 37-43

Week 4, Feb 19, 21: The development of Creativity in Children **Presentation 1b**

A: Russ, S. W. (2016). Pretend play: Antecedent of adult creativity. In B. Barbot (Ed.), Perspectives on creativity development. *New Directions for Child and Adolescent Development*, 151, 21–32
B: Russ, S.W. (2016).

B: Roland, C. (2006). Young in Art: A developmental look at Child Art. www.artjunction.org

Week 5, Feb 26, & 28: Gender and Creativity **Presentation 2**

A: Gruwal, D. (2014). The Creativity Bias against Women. *Scientific American*, December 8

B: Boxer, S. (2016). An era for women artists. *The Atlantic*. <https://www.theatlantic.com/magazine/archive/2016/12/move-over-michelangelo/505826/>

Week 6. March 5, 7 *Can creativity be measured?* **Presentation 3**

A: Dumas, D., & Dunbar, K. N. (2016). The Creative Stereotype Effect *PLOS One*

B: Baer, J. (2016). Creativity doesn't develop in a vacuum. In B. Barbot (Ed.), Perspectives on creativity development. *New Directions for Child and Adolescent Development*, 151, 9–20.

C: Kim, K.H. (2011). The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking. *Creativity Research Journal*, 23, 285-295.

Week 7, March 12 & 14 **Midterm Issues**

March 12 overview for Midterm

March 14. In class midterm examination on ELMS

Week 8, : March 13 & 15 Creativity in Science and Engineering Presentation **Presentation 4**

A: Lehrer, J. (2009). The Neuroscience of Screwing Up. *Wired magazine*, December 21.

B: Zhang, S. (2018). Battle-genome-editing-gets-science-wrong, *Wired*, January

Spring Break, March 17-March 24

Week 9, March 26 & 28: Cooking, Food & Cuisine: The 21st century revolution **Presentation 5 Thursday Mar 28**

A: Billow, R. (2014). How IBM's chef Watson actually works. *Bon Appetit magazine*, June 30. <http://www.bonappetit.com/entertaining-style/trends-news/article/how-ibm-chef-watson-works>

B: Cousins, J., O'Gorman, K.D., and Stierand, M. (2011). Molecular gastronomy: Basis for a new culinary movement, or modern day alchemy? *International Journal of Contemporary Hospitality Management*. 22, 399-415.

C: Hart, H. (2014).. [Cataloging Creativity: Ferran Adrià Showcases 7 Years Of Culinary Art And Science](https://www.fastcompany.com/3027589/cataloging-creativity-ferran-adria-showcases-7-years-of-culinary-art-science) *Fast Company*. March 19. <https://www.fastcompany.com/3027589/cataloging-creativity-ferran-adria-showcases-7-years-of-culinary-art-science>

Week 10, April 2 & 4. The Brain & Creativity. **Tuesday April 2 Presentation 6**

A: Kaufman, S., B. (2013). The real neuroscience of creativity. *Scientific American*, August 17

B: National Endowment for the Arts (2015). How Creativity works in the brain. Chapter 1, Pages 16-22.

C. Lindell, A.K., & Kidd, E. (2011). Why Right-Brain Teaching is Half-Witted: A Critique of the Misapplication of Neuroscience to Education. *Mind, Brain, & Education*, 5, 121-127.

Week 11 April 9 & 11. Mental illness and Creativity **Presentation 7**

- A. Mula, M Hermann, B, Trimble, M.R (2016). Neuropsychiatry of creativity. *Epilepsy & Behavior*, 57, B, 225–229.
- C. Arehart-Treichel, J. (2012). Genes May Be Missing Link Between Creativity, Mental Illness. *Psychiatric News*. Published online: January 20,

Week 12 April 16 & 18 Music & Creativity **Presentation 8**

- A: Levitin, D. (2011). In search of the musical mind.. *Cerebrum* 2, 31-49
- B: Draper, P. (2009). How online social networks are redefining knowledge, power, 21st century music-making and higher education. *Journal of Music Research Online*
- C: *Mason, W. (2017) Three Iconic Musicians on Artistic Creation and Its Importance Now, Beck, Kendrick Lamar and Tom Waits articulate the creative impulse. New York Times, March 5.*

Week 13, April 23, & 25: Malevolent Creativity or just normal creativity Beyond **Presentation 9**

- A. Gladwell, M. (2011). "Creation Myth: Xerox PARC, Apple, and the truth about innovation" *The Atlantic Magazine* May 16.
- B. Cropley, A. Kaufman, C, Cropley , C. (2008). Malevolent Creativity: A Functional Model of Creativity in Terrorism and Crime. *Creativity Research Journal*, 20(2), 105–115.
- C. Mirsky, S. (2012). Creativity's Dark Side: Dan Ariely on Creativity, Rationalization and Dishonesty December 25 podcast.

Week 14, April 30 & May 2 AI robots and Creativity. **Presentation 10**

- A: Fitzgerald, T, Goel, A, Thomaz, A. (2016). Human-Robot Co-Creativity: Task Transfer on a Spectrum of Similarity
- B: Dorhmel, L. (2018). Truly Creative AI is just around the Corner. *Digital Trends* Jan 8. <https://www.digitaltrends.com/cool-tech/artificial-intelligence-creativity-future/>

Week 15, May 7 & 9

- May 7 Putting Creativity Together:
- May 9 Questions and answers about the final essay

Additional or different readings may be assigned to particular weeks

Final Essay is due anytime between May 3rd and May 16th.

Grading Scale for each component of the course

A+	97-100%	B+	87-89%	C+	77-79%	D+	67-69%	F	below 60%
A	93-96%	B	83-86%	C	73-76%	D	63-66%		
A-	90-92%	B-	80-82%	C-	70-72%	D-	60-62%		