This 1 credit, 8-week interdisciplinary honors course is designed around the 2015 Life Sciences & Society Symposium (Mar 13-15). We'll explore the science of epigenetics and its implications for other academic disciplines and society at large. The profound influence of the environment on heritable expression of our genes is providing new insights into fields as diverse as psychology, sociology, philosophy, and medicine, and into topics as diverse as development, nutrition, disease, behavior, education, ethics, and even public policy.

We'll do in-depth reading and discussion of the published work of the speakers prior to the symposium, attend the symposium and interact with the speakers, and then have one meeting afterwards to discuss what we learned from the conference itself.

The course requires you to think across disciplines. In the discussion of each speaker's work you'll make connections between developments in other areas and think critically about the implications of those connections. Letter grades will be based on participation in class discussions (60pts), leading a class discussion with another student (20pts), and a 4-6 page paper (20 pts). The final project has you describe a possible future in which everything about the current world is the same except for one technological change having to do with epigenetics. Pick a concept or technology discussed in class and imagine what our world would be like if this were to be widespread, and create alternative scenarios, utopic or dystopic. Have fun with this assignment, but be as accurate to the science as you can.

Genes & Beyond: How the environment shapes who we are is taught by Dr. Heidi Appel, Senior Associate Director of the Honors College and Senior Research Scientist in CAFNR (appelh@missouri.edu) and Dr. Karthik Panchanathan, Assistant Professor in Anthropology (karthikpanchanathan@gmail.com).
Class Schedule

Jan 22  What is Epigenetics?
Jan 29  Emily & Austin - Massimo Pigliucci
Feb 5   Jeff & Rebecca - Tracy Bale
Feb 5   Sarah & Kynan – Shanna Swan
Feb 19  Jackie & Danielle – Irva Hertz-Picciotto
Feb 26  Keenan & Hal – Frederick Hausheer
Mar 5   Alyssa & Lauren & Katy – Annie Murphy Paul
Mar 13-15  Attendance at the Symposium, March 13-15 late afternoon Fri -Sun
(There may also be 1-2 evening talks earlier in the week)
Mar 30  Final Projects Due

Confirmed Symposium Speakers:

Massimo Pigliucci, City University of New York, Well-known philosopher of science with a background in genetics; [http://en.wikipedia.org/wiki/Massimo_Pigliucci](http://en.wikipedia.org/wiki/Massimo_Pigliucci)


Tracy Bale, University of Pennsylvania; Mouse models of human neuropsychiatric disease; [http://www.med.upenn.edu/cnb/faculty_bale.html](http://www.med.upenn.edu/cnb/faculty_bale.html)

Shanna Swan, Mount Sinai School of Medicine; Developmental programming/epigenetics in baby boys related to phthalate exposure; [http://shswan.com/](http://shswan.com/)

Frederick Hausheer, BioNumerik Pharmaceuticals, Inc.; CEO will discuss economic and business impacts of epigenetic research, especially in the fields of health and medicine

Irva Hertz-Picciotto, UC Davis; Public health researcher working on impacts of environmental toxins in the origins of several human diseases, incl autism [https://www.ucdmc.ucdavis.edu/mindinstitute/ourteam/faculty/picciotto.html](https://www.ucdmc.ucdavis.edu/mindinstitute/ourteam/faculty/picciotto.html)

Pending Invitations:

Jim Carrington, Danforth Center in St. Louis; Researcher on RNA-mediated regulation and silencing of genomes, genes and viruses. [http://www.danforthcenter.org/about/leadership/dr-james-c-carrington](http://www.danforthcenter.org/about/leadership/dr-james-c-carrington)

Oliver Rando, University of Massachusetts Medical School; studies enomic approaches to chromatin structure & function, and to epigenetic inheritance; [http://profiles.umassmed.edu/profiles/display/129805](http://profiles.umassmed.edu/profiles/display/129805)
Course Policies

Academic Honesty
Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person’s work has been responsibly and honorably acquired, developed and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful.

Academic misconduct includes but is not limited to the following:

• Use of materials from another author without citation or attribution.
• Use of verbatim materials from another author without citation or attribution.
• Extensive use of materials from past assignments without permission of your instructor.
• Extensive use of materials from assignments in other classes without permission of your instructor.
• Extensive use of materials from work in a University media organization or external media organization without permission of your instructor.
• Fabricating information in news or feature stories, whether for publication or not.
• Fabricating sources in news or feature stories, whether for publication or not.
• Fabricating quotes in news or feature stories, whether for publication or not.
• Lack of full disclosure or permission from editors when controversial reportorial techniques, such as going undercover to get news, are used.

When in doubt about plagiarism, paraphrasing, quoting or collaboration, consult with your instructor. For closed-book exams and exercises, academic misconduct includes conferring with other class members, copying or reading someone else's test and using notes and materials without prior permission of the instructor. For open-book exams and exercises, academic misconduct includes copying or reading someone else's work.

Classroom Misconduct
Classroom misconduct includes forgery of class attendance; obstruction or disruption of teaching, including late arrival or early departure; failure to turn off cellular telephones leading to disruption of teaching; playing games or surfing the Internet on laptop computers unless instructed to do so; physical abuse or safety threats; theft; property damage; disruptive, lewd or obscene conduct; abuse of computer time; repeated failure to attend class when attendance is required; and repeated failure to participate or respond in class when class participation is required.

IMPORTANT: Entering a classroom late or leaving a classroom before the end of the period can be extremely disruptive behavior. Students are asked to arrive for class on time and to avoid early departures. This is particularly true of large lectures, where late arrivals and early departures can be most disruptive. Instructors have the right to deny students access to the classroom if they
arrive late and have the right to dismiss a student from the class for early departures that result in disruptions.

Under MU policy, your instructor has the right to ask for your removal from the course for misconduct, disruptive behavior or excessive absences. The instructor then has the right to issue a grade of withdraw, withdraw failing or F. The instructor alone is responsible for assigning the grade in such circumstances.

**Dishonesty and Misconduct Reporting Procedures**
MU faculty are required to report all instances of academic or classroom misconduct to the appropriate campus officials. Allegations of classroom misconduct will be forwarded immediately to MU's Vice Chancellor for Student Services. Allegations of academic misconduct will be forwarded immediately to MU's Office of the Provost. In cases of academic misconduct, the student will receive at least a zero for the assignment in question.

**Professional Standards and Ethics**
The School of Journalism is committed to the highest standards of academic and professional ethics and expects its students to adhere to those standards. Students should be familiar with the Code of Ethics of the Society of Professional Journalists and adhere to its restrictions. Students are expected to observe strict honesty in academic programs and as representatives of school-related media. Should any student be guilty of plagiarism, falsification, misrepresentation or other forms of dishonesty in any assigned work, that student may be subject to a failing grade from the instructor and such disciplinary action as may be necessary under University regulations.

**Academic Inquiry, Course Discussion and Privacy (with regard to audio and or video recording of class)**

**Faculty allowing recording:**
*University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.*

**Faculty not allowing recording:**
*University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may not make audio or video recordings of course activity, except students permitted to record as an accommodation under Section 240.040 of the Collected Rules. All other students who record and/or distribute audio or video recordings of class activity are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.*

*Those students who are permitted to record are not permitted to redistribute audio or video recordings of statements or comments from the course to individuals who are not students in the course without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.*

**University of Missouri-Columbia Notice of Nondiscrimination**
The University of Missouri System is an Equal Opportunity/ Affirmative Action institution and is nondiscriminatory relative to race, religion, color, national origin, sex, sexual orientation, age,
disability or status as a Vietnam-era veteran. Any person having inquiries concerning the University of Missouri-Columbia's compliance with implementing Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans With Disabilities Act of 1990, or other civil rights laws should contact the Assistant Vice Chancellor, Human Resource Services, University of Missouri-Columbia, 130 Heinkel Building, Columbia, Mo. 65211, (573) 882-4256, or the Assistant Secretary for Civil Rights, U.S. Department of Education.

**Accommodations**
If you have special needs as addressed by the Americans with Disabilities Act and need assistance, please notify me immediately. The school will make reasonable efforts to accommodate your special needs. Students are excused for recognized religious holidays. Please let me know in advance if you have a conflict.

**ADA Compliance**
If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need assistance, please notify the Office of Disability Services, S5 Memorial Union, 882-4696, or the course instructor immediately. Reasonable efforts will be made to accommodate your special needs.

**Religious Holidays**
Students are excused for recognized religious holidays. Let your instructor know in advance if you have a conflict with schedule class activities.

**Intellectual Pluralism**
The University community welcomes intellectual diversity and respects student rights. Students who have questions concerning the quality of instruction in this class may address concerns to either their Faculty Chair, Associate Dean or to the Director of the Office of Students Rights and Responsibilities (http://osrr.missouri.edu/). All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.