**HUMANS AND ROBOTS**

**SPRING 2016 – THEA 4393-002**

**MWF 9:00 – 9:50 a.m.**

**Room: Geosciences Building 233**

**Instructor:** Julienne Greer, PhD

**Office Number:** 197A FA

**Office Telephone Number:** 817-272-0729

**Email:** jgreer@uta.edu

**Faculty Profile:** <https://www.uta.edu/profiles/julienne-greer>

**Office Hours:** Monday and Wednesday, 11:00 a.m. – 1:00 p.m. or by appointment.

### Course Content:

### Lecture and applied practices of the emerging emotional interaction between robots and humans utilizing theatrical methodologies. Course will cover human and robot interactions from an interdisciplinary approach: cultural, historical, sociological, health-care, performing arts, and persons with disabilities framework.

### Student Learning Outcomes:

Upon successful completion of this course the student will:

* Develop a fundamental knowledge and significance of the chronology and history of social robotics.
* Analyze the significant role persons with disabilities and the disabilities community has in social robotics advances.
* Discuss, explore, and analyze the role theatre arts and specifically performance methodologies have in social robotics.
* Analyze the ethics and social/cultural implications of emotional Artificial Intelligence in machines.
* Analyze the advantages and limitations of the present social robotics industry from a Western and international perspective.
* Demonstrate proficiency in writing and presenting intricate ideas pertaining to AI and its relationship to human beings.
* Engage in respectful discussion that furthers the scholarly understanding of the human robot topic

### Required Text

No required text; however, there will be multiple readings, peer-reviewed articles, and journals.

### Recommended Text

*Alone Together* Sherry Turkle 2011.

**Major Assignments and Examinations:** All homework assignments must be turned in at the start of the class. Failure to do so will constitute a grade of zero for the homework assignment in question. The final exam will be given according to the university’s published final exams schedule. Note that failure to appear for an exam at the scheduled time will constitute a grade of zero in that exam. There will be weekly written assignments that will consist 30% of your grade. There will be a formal research presentation that will consist of 60% of your grade. Participation in class is vital to the nature and substance of the course and will consist of 10% of your grade. Full explanation of the assignments will be given in class.

Your grade will be based on the:

* Quality of work in the assignments listed above.
* Discipline and commitment shown in your promptness.
* Attendance.
* Preparation for class and written assignments.
* Collaborative efforts with peers.
* Alert participation in class critiques and discussions of artistic merit.

**Attendance Policy:** At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I have established the following attendance policy: the student will be expected to sign-in each day for class. It is expected that you will be on time for class. In addition, it is expected that you remain for the entire session. Late arrivals and early departures will affect not only your ability to receive the information but also that of your colleagues. If you are tardy three times, you will be assigned an absence. If you miss class because of illness *and* present a doctor’s statement attesting to your illness, then you may make up missed work. HOWEVER, it only means that you have used up one of your ALLOWED absences. It does NOT mean that you are allowed an “extra” absence besides the THREE (3) allowed before it begins to deduct final course grade points.

Attendance: **Three excused or unexcused absences allowed. Sickness is an unexcused absence. Each subsequent absence your grade is lowered ONE FULL LETTER GRADE per absence. You must keep track of your absences.**

**Grading Policy**: See Major Assignments and Examinations.

**Expectations for Out-of-Class Study**: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 3 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

**Make-up Exam Policy**: No make-up exams are given except for medical or other similar hardships where advanced arrangements are made with the instructor; or in case of non-selective medical emergencies with physician’s note or documentation. Otherwise, failure to take the exam at the scheduled time will result in a zero grade in the exam.

**Grade Grievance Policy**: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate / graduate catalog.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/ses/fao>).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Title IX:** The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

**Academic Integrity:** All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

**Student Support Services Available:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located at the end of the hallway to the left of the classroom. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

**Classroom Atmosphere:** It is expected that you will be supportive to each of your colleagues in this class. It will also be important to keep non-productive discussions and comments to a minimum.

**Course Attendance and Production Assignments**: Students cast in acting roles or who have lead technical or design assignments in UTA productions are required to attend class on a regular basis. Failure to do so shall result in the student being reported to the student's Area Head for their degree plan and the Production Manager and may result in the student being replaced in their production assignment.

**Conference Attendance Policy:** Department of Theatre Arts majors are encouraged to participate in theatre conferences and graduate school auditions. However, Theatre Arts majors are required to submit an excused absence request to the instructor no less than two full weeks prior to the conference/audition in order for the instructor to consider granting an excused absence. Such notification must be in writing and support documentation will be required to verify the Theatre Arts major’s attendance, completion and/or successful (or professionally worthwhile) participation in said conference or audition. All students are expected to complete all coursework (as stipulated in the syllabus) and all course requirements (as stipulated by the syllabus) in a timely manner (the term “timely manner” will be defined/specified by the instructor at the time the Theatre Arts majors submit their excused absence request to the instructor for initial consideration). At the discretion of the instructor, class participation grades may be affected; therefore, Theatre Arts majors are advised to fully consult with the instructor prior to engaging in such activities.

**SCHEDULE**

This course will be delivered in four (4) sections; 1) History of robotics from industrial to social, 2) Social robotics and persons with Disabilities, 3) Theatre Arts and social robotics in performance 4) Roboethics, or the morality and ethics of social robotics from a humanistic perspective.

There will be written assignments due on peer-reviewed journals articles as well as off-campus study of various robotic platforms and units housed at UT-Arlington. The student will engage in discussion that furthers the scholarly understanding of the human robot topic. The course will conclude with a formal presentation expanded on one of the above topics.

**January**

20 Syllabus

22 Introductions and interests

25 **Why should we study robots, digital humanities, and theatre?**

27 History of robotics from industrial to social: robots in antiquity

29 History of robotics from industrial to social: renaissance to early 20th century

**February**

1 History of robotics from industrial to social: 1930s – 1950s

3 History of robotics from industrial to social: 1960s – 1990s

5 History of robotics from industrial to social: contemporary 1990s - 2016

8 Types of contemporary robots: Industrial

10 Types of contemporary robots: Service

12 Types of contemporary robots: Social, Emotional, Companion

15 Uncanny Valley

17 **Social robotics and persons with Disabilities - overview**

19 Social robotics and persons with Disabilities – Robots for older adults/healthcare

22 Social robotics and persons with Disabilities - Autism

24 Social robotics and persons with Disabilities – socio/economic factors for persons with disabilities.

26 Fixed: The Science Fiction of Human Enhancement

29 Fixed: The Science Fiction of Human Enhancement - discussion

**March**

2  **Guest speaker**

4 Human Enhancement - performance

7 **Theatre and Robots: Robots in performance – an overview**. Written explanation of group project ideas discussion.

9 Ex Machina (film), Metamorphosis by Franz Kafka (literature).

11 Written explanation of group project ideas due.

**Spring Break 3/14 – 3/18**

21 Literature and plays including robots;*R.U.R.* by Karel Capek, *I, Robot* by Isaac Asimov

23 Literature and plays including robots;*R.U.R.* by Karel Capek, *I, Robot* by Isaac Asimov

25 Helios 24/7

28 Theatre and Robots, *Metamorphosis* by Franz Kafka (French/Japanese collaboration, dir. By Oriza Hirata and roboticist Hiroshi Ishiguro)

30 Tour of UTARI

**April**

1 **Guest speaker**

4 Robot Opera, Opera of the Future, MIT Media Lab – *Death and the Powers*, a new opera by Tod Machover

6  **Roboethics, or the morality and ethics of social robotics from a humanistic perspective – an overview**

8 Roboethics: privacy issues

11 Roboethics: the singularity

13 Roboethics: multi-disciplinary discourse of social robotics

15 Roboethics: *to be or not to be* – should robots look like humans

18 Roboethics: a humanistic perspective on emotional robots

20 Roboethics: Emotional analytics and commerce

22 Roboethics: Companion robots

25 The artist - technology

27 **Guest speaker**

29 Presentation of final projects

**May**

2 Presentation of final projects

4 Presentation of final projects

6 Presentation of final projects

*As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Julienne A. Greer*

**Final Examination May 11 8 – 10:30 a.m.**