Kennesaw State University
MTRE 4400 – Directed Research – Mechatronics
Course Syllabus – Fall 2019

I.   Identifying information

Student(s): *******
Course: MTRE 4400 Healthcare Robotics, 3 credits
Instructor: Kevin McFall, PhD.

II.   Course Description

This course will explore developing healthcare robotics that function to perform hospitalize tasks that can be used to alleviate work load on physicians and/or staff, provide for patients, or maintain workflow and hospital environment. This will include discussing the perception of mechanized robots in healthcare by users and patients.

III.   Objective of the Course

This directed research aims to prepare a manuscript discussing current advances and implementation of robots used in healthcare by polling physicians, staff/personnel and patients on their perception of robots in healthcare to determine if physical appearance and the types of tasks performed by them have an effect on their use. Finally, it will explore developing technology locally that can be used to advance healthcare.

IV.   Detailed Schedule

Week 1: CITI training and drafting of questionnaire
Week 2: Obtain hospital or clinic approval for polling and submit IRB application
Week 3: Perform literature review and outline manuscript
Week 4: Begin polling and research available commercial medical robots
Week 5: Compile interview results from companies and academics developing robots for healthcare
Week 6: Begin drafting manuscript
Week 7: Finalize manuscript

The student is expected to work independently on this project, of course under direction of the instructor. Meeting with the instructor is expected at least once weekly, demonstrating completion of the week's task. A minimum total of 150 hours of time is required on this project. The student is expected to follow all safety guidelines when interacting with equipment as directed by instructors and laboratory technicians.

V.   Basis for Evaluation

The primary deliverables for this course is a manuscript to be submitted to the Kennesaw Journal of Undergraduate Research. The student will be evaluated on satisfactory creation and distribution of the questionnaires (40%), compilation of a logbook documenting the progress made and time spent (20%), and preparation of a manuscript for publication (40%). Grades will be assigned for each component according to the following rubric:

- A (90-100): Exceptional deliverable quality and/or completion of extended topics
- B (80-89): Satisfactory completion of deliverables
- C (70-79): Incomplete completion of deliverables
- D (60-69): Partial completion of deliverables
- F (0-59): Little or no completion of deliverables

Federal, BOR, & KSU Course Syllabus Policies

Information contained in the links below constitutes the Federal, BOR, and KSU course syllabus policies and procedures and may be referenced by faculty members in their course syllabi. These policies are updated on the Academic Affairs Website annually.

Academic Affairs - Federal, BOR, & KSU Policies

Academic Affairs - KSU Student Resources for Syllabus

Note to Faculty: The KSU faculty handbook requires the Academic Integrity Policy in the course syllabus.

Note to Faculty and Students: The Office of the Provost will work to keep the policies and links in this document as accurate as possible.

Academic Integrity Statement

Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Section 5c of the Student Code of Conduct addresses the university's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to university materials, misrepresentation/falsification of university records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the Department of Student Conduct and Academic Integrity (SCAI), which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement. See also KSU Student Code of Conduct.

Electronic Communication

The University provides all KSU students with an "official" email account with the address "students.kennesaw.edu" or "kennesaw.view.usg.edu" (in D2L). As a result of federal laws protecting educational information and other data, this is the sole email account you should use to communicate with your instructor or other University officials.