Tumor Science and Engineering

Time: Tuesday 8th Period (3:00-3:50)

Location: Little Hall 119  
Fall 2018

Instructors

W. Gregory Sawyer  
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Office Hours by appointment.

Course Description

Cancer is a complex and heterogeneous disease involving more than just cancer cells. A diverse cast of components in the surrounding microenvironment interact with cancer cells and actively facilitate malignant progression in a three-dimensional (3D) structure. In this 1-credit course we will explore a wide range of topics guided by the “Hallmarks of Cancer”. We will analyze and examine how cancer is illustrated and discussed, the breadth of treatment strategies and the mechanisms of action for the strategies, and the science and engineering behind exciting new therapies along with the recent convergence of medicine, science, and engineering in new research to combat this disease.

Required Textbooks

All required materials will be provided.

Course Schedule

August 28th L1: Introduction of Cancer / History

September 4th L2: History of Cancer

September 11th L3: Fundamental Biology Lecture

September 18th L4: Hallmarks of Cancer

September 25th L5: Hallmarks of Cancer II

October 2nd L6: Immune System Lite

October 9th L7: Carcinoma

October 16th L8: Other Cancers

October 23rd L9: Detection/Staging/Monitoring

October 30th L10: Chemotherapy

November 6th L11: Radiation

November 13th L12: Parker Gibbs, Surgery

November 20th off

November 27th L13: Duane Mitchell, Tumor Immunotherapy  
December 4th L14: Precision Medicine/Lab Tour

Evaluation of Grades

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| --- | --- | --- |
| Assignment | Total Points | Percent of Grade |
| Final Paper | 60 | 60% |
| Participation | 40 | 40% |
| TOTAL | 1000 | 100% |

Grading Policy

|  |  |  |
| --- | --- | --- |
| Percent | Grade | Grade Points |
| 93.4-100 | A | 4.00 |
| 90.0-93.3 | A- | 3.67 |
| 86.7-89.9 | B+ | 3.33 |
| 83.4-86.6 | B | 3.00 |
| 80.0-83.3 | B- | 2.67 |
| 76.7-79.9 | C+ | 2.33 |
| 73.4-76.6 | C | 2.00 |
| 70.0-73.3 | C- | 1.67 |
| 66.7-69.9 | D+ | 1.33 |
| 63.4-66.6 | D | 1.00 |
| 60.0-63.3 | D- | 0.67 |
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More information on grades and grading policies is here:

https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Class Attendance and Make-Up Policy

Class attendance is expected. Each unexcused absence will result in a 10 point reduction in the final grade. Excused absences are consistent with university policies in the undergraduate catalog (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx) and require appropriate documentation.

Late essay response papers will not be accepted. A makeup midterm and makeup final exam will be provided for students who miss either exam due to extreme, documented circumstances. A cumulative make-up quiz will be provided at the end of the semester for any and all quizzes missed. This score will replace all missing quiz grades. Students should arrange with the instructor for makeup material, and the student will receive one week to prepare for any makeup assignment, if circumstances allow it.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

Class Demeanor

Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor, invited guest, and fellow students. Please avoid the use of cell phones and restrict eating to outside of the classroom. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

Materials and Supplies Fees

There are no additional fees for this course.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct- honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Counseling and Wellness Center

Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.