

**PHA 6935**  
**New Approaches in Drug Discovery (1 Credit Hour)**  
**Spring 2021**

**Instructor:**

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Class Time: TBD  
Classroom: TBD

**Description:**

The course provides an overview of some of the new approaches and technologies used in drug discovery. The course will combine pre-lecture readings and in-class discussions. After an introduction to the principles, real world examples will be discussed. The course is designed to prepare students to become future “drug hunters” through building a strong foundation of scientific knowledge and understanding of modern drug discovery. This is a one credit course and students should expect to put in 6-8 hours of work per week.

**Prerequisites:** Graduate student status, Drug Design I (PHA6447)

**Required Text:** Reading material will be assigned every week

**Course Objectives:**

- 1) To provide the general knowledge and practice of the recent advances in drug discovery.
- 2) To understand various new techniques and approaches in drug discovery.
- 3) To improve life-long learning and problem-solving abilities critical to becoming a PhD-level “drug hunter”.

**Student Evaluations:** Students will be graded on independent study and homework assignments, in-class discussion, a final essay, and an oral presentation.

Independent Study and Homework Assignments:	40% of grade
In-Class Discussion:	20% of grade
Final Essay and Presentation:	40% of grade

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Total Grade:	100%
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Course letter grades will be assigned according to the following percentage scale (out of 500 possible points): 100-91.5% (A), 91.4-89.5% (A-), 89.4-87.5 (B+), 87.4-81.5% (B), 81.4-79.5 (B-), 79.4-69.5 (C), 69.4-59.5 (D), <59.4 (E).

**Assignments:**

Reading assignment will be distributed through email 1-2 weeks before each new topic.

Take-home problems will be assigned after each lecture.

Essay and Presentation: A recently FDA approved small molecule drug will be assigned to each student. The essay can include background, history of drug discovery and development, SAR, pharmaceutical properties,

synthesis, in vitro/in vivo assays, clinical studies, and your comments/thoughts. In addition, the student will prepare a PowerPoint presentation based on the essay. References and supporting material found therein should be reviewed in order to present a complete story. Students will present for 25-30 min followed by a 10 min Q&A discussion. Essay due date---to be determined; Presentation: last week of the semester.

This course syllabus is a general plan for the course. The course instructor may make modifications and exceptions to this syllabus at his discretion at any time during the semester; any changes will be announced during regularly scheduled lecture periods.