HC 407   **L.E.A.D. Medicinal Molecules**

CRN: 39219   Section 501   SEM   R 1000 - 1050   1 HC Credit(s)

Instructor(s): Jeff Gautschi

The L.E.A.D. Medicinal Molecules course is an experiential learning course designed to Learn about, Experience, And Develop (L.E.A.D.) medicinal compounds. Students will first develop a high-level understanding of the modern practices and strategies used to generate drug candidates for diseases (also termed "lead molecules") by exploring the drug discovery processes currently followed by pharmaceutical, biotechnology, and bioscience firms. Experientially, students will also visit between 1 and 3 local companies working in this area to experience first-hand the operations behind making therapeutic drugs. Visits will include a tour of facilities, Q&A with industry scientists, potentially operation of some equipment, and subsequent reflection discussions with their instructor and peers. Students will then select a disease of their choosing and consider the challenges and opportunities to develop therapeutic drugs for that disease. In some cases, therapies will already exist, and students will consider how they came to be; but for others, there may not be an existing cure and students will need to consider why that is the case. By reading primary scientific literature, engaging in guided group discussions, and following a pre-defined reporting outline, students will craft a final presentation about the current state of medicinal molecules for their disease. Presentations may include, among others, the social and economic impacts of the disease, the identity of the biological drug target(s), historical attempts to find drugs for the disease, current firms working toward cures, current lead candidates in the pharmaceutical/biotech/bioscience pipeline, and their own ideas of any molecules they uncover that they think should also be considered a "lead molecule" for that disease. Students will also receive instruction on how to make a meaningful presentation. Students will then present their reports orally to the class, with an open invitation to our faculty and potentially scientific community members. This course will provide a good understanding of the current drug discovery process. **Graded P/N. Satisfies: HC Colloquia**

HC 408   **Thesis: Stage 2 Explore & Build**

CRN: 40417   Section 501   HYB   SAT 1200 – 1450   1 HC Credit(s)
                                                     Meets only on Saturday, Jan 27, 2018

Instructor(s): Kassena Hillman

This is a hybrid course. This course includes one scheduled on-site classroom meeting and significant online, out-of-classroom components that replace regularly scheduled class meeting time. A substantial portion of the course learning activities are delivered online. In this course you will learn to lay the groundwork for a successful thesis experience. We will focus on the value of the thesis, what it takes to successfully complete a thesis (e.g. identify a mentor, identify a topic, level of effort required, etc.), and we'll hear from students and faculty with experience in the thesis process. You will complete all of the tasks related to stage 2 of the Thesis process by: 1) Summarizing an interview/conversation with a faculty member who could serve as a mentor, 2) Summarizing an interview/conversation with an Honors student currently working on their thesis, and 3) Exploring a series of resources and opportunities available to successfully complete the thesis. Stage 3 of the TheSIS is then designed to move students through the steps required to complete a signed thesis proposal and pose some additional questions relevant to this stage of their experience. Course will be team taught. **Meets January 27 only.** PREREQ: Prior completion of Thesis Stage 1 as outlined at honors.oregonstate.edu/thesis. **Graded: P/N. Satisfies: HC Thesis/Research/Projects**