# Medicinal Chemistry

#### CHM 4294, Spring 2017

BU 402, Mondays & Wednesdays 4:00 - 5:20 PM

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| --- | --- |
| **Instructor:** | Prof. Salvatore Lepore, S&E 136, 7-0330, *slepore@fau.edu* |
| **Office Hours:** | To be announced |
| **Text:** | *Medicinal Chemistry: An Introduction (second edition)*  (Gareth Thomas) Wiley, 2007 (ISBN 978-0-470-02598-7). Required |

**Course Description** (3 credit hours)

This course will provide a comprehensive and balanced introduction to medicinal chemistry beginning with fundamental principles and progressing to principal methods used in drug design such as quantitative structure-activity relationships, computer-aided drug design, and combinatorial chemistry. Subsequent discussions of more specialized aspects of medicinal chemistry will involve pharmacokinetics and drug metabolism. These concepts will be discussed using numerous examples of drugs and drug action.

## Course Objective

## The objectives of the course are to provide chemists with a broad introduction to the background, concepts, and tools of medicinal chemistry. At the end of the course, the students should be able to solve medicinal chemistry-related problems in their principal fields of study.

**Homework**

While homework will not count towards the course grade, the end-of-chapter exercises are an important preparation for exams given in the course (see grading policy below). It is strongly advised that students thoughtfully work all homework problems and those brought up in lecture.

**Assessment (grading)**

• Exams 1 and 2 (50% each). There will be no cumulative final exam.

• The tentative grading scale for the course:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A  A-  B+  B  B-  C+ | 93-100  90-92  87-89  83-86  80-82  77-79 |  | C  C-  D+  D  D-  F | 73-76  70-72  67-69  63-66  60-62  0-59 |

**Tentative Schedule of Lectures**

|  |  |  |
| --- | --- | --- |
| Week |  | Topic |
| Jan 11 |  | An introduction to drugs (chapter 1) |
| Jan 18 |  | MLK Day (Jan 18) – no class |
| Jan 25 |  | Drug structure and solubility (chapter 2) |
| Feb 1 |  | Drug structure and solubility (chapter 2) |
| Feb 8 |  | SAR (chapter 3) |
| Feb 15 |  | Computer-aided drug design  (chapter 4) |
| Feb 22 |  | Combinatorial chemistry (chapter 5) |
| Feb 29 |  | *Exam 1* (Mar 2) |
| Mar 7 |  | Spring Break |
| Mar 14 |  | Biological membranes (chapter 7) |
| Mar 21 |  | Biological membranes (chapter 7) |
| Mar 28 |  | Receptors and messengers (chapter 8) |
| Apr 4 |  | Last day to withdraw (Apr 8) |
| Apr 11 |  | Drug metabolism (chapter 12) |
| Apr 18 |  | Drug metabolism (chapter 12) |
| Apr 25 |  | Analogues (chapter 15) |
| May 2 |  | *Exam 2* (May 2) from 4:00 – 6:30 PM; note that Exam 2 will not be a cumulative final |

**Make-up Policy**

There will be no make-up exams except in the following cases:

1. Medical emergency

2. Death in the immediate family

3. Participation in an FAU-sponsored academic or athletic activity/event

4. Required appearance in a civil or criminal court

5. Religious Holiday

A request for exemption from the exam policy for any of the above reasons will be considered only if the student does not attempt a given exam AND written documentation (e.g. medical certificate etc.) is submitted to the professor within 2 days (before or after) of the scheduled exam date.

**Prerequisites**

CHM 2211 and BCH 3033 with a Minimum grade of C in each course.

**Withdrawal**

Please check the official FAU website regularly for the most up to date information on last day to withdraw without a “W” & last day to withdraw without an “F” dates for this semester.

**Incomplete Grade Policy**

Please refer to the FAU’s graduate Catalog for the policy on “I” grades.

**Attendance Policy**

Note the following from the FAU Undergraduate Catalog: “Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the Instructor.”

**Disability policy statement**

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Student Accessibility Services (SAS) - in Boca Raton, SU 133 (561- 297-3880) – and follow all SAS procedures.

**Honor Code policy statement**

Students at FAU are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at

www.fau.edu/ctl/4.001\_Code\_of\_Academic\_Integrity.pdf

**Anti-Discrimination and Anti-Harassment Policy**

Students, faculty and staff at FAU are expected to abide by the published anti-discrimination and anti-harassment policy:

www.fau.edu/regulations/chapter5/Reg%205.010%206-2015.pdf.