

*Physiology 115*

# Cell Physiology

Spring 2015 term

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Prepared especially for Life Chiropractic College West

# Course Overview

## Course Description

- The structure and function of the cell and all its organelles are described, illustrating how life processes in the cell are reflected in the functioning of the whole body.

*Topics covered in detail are:*

- structure and function of cell membranes
- transport of material across membranes
- protein structure and function
- motility in cells (microfilaments and microtubules)
- carbohydrates, cellular respiration
- ATP, nucleic acids
- protein synthesis
- mitosis, meiosis

# Course Overview

## Prerequisites

None

## Weekly Lecture Days & Times

Monday & Wednesday mornings

9:50 to 11:40

according to LCCW term calendar

# Course Overview: Content

## Required Text

Content from lectures

## Recommended Texts

Marieb EN (2011) *Human Anatomy & Physiology* 10<sup>th</sup> Ed

ISBN-10: 0321695984 | ISBN-13: 978-0321695987

Becker WM (2011) *The World of the Cell* 8<sup>th</sup> Ed

ISBN-10: 0321716027 | ISBN-13: 978-0321716026

Raven P (2010) *Biology* 9<sup>th</sup> Ed

ISBN-10: 0073532223 ISBN-13: 978-0073532226

All books on reserve in library

# Instruction Details

- Grading/Evaluation

- Weekly Quiz (10%)
  - 5 quizzes for course
- Midterm Examination (30%)
  - one midterm in Week 5
  - covering all lecture content up to midterm date
- Oral Presentation (10%)
- Final Examination (50%)
  - one final in Week 11
  - covers lecture content AND student oral presentation content

- Grades

|         |   |
|---------|---|
| 90-100% | A |
| 80-90%  | B |
| 70-80%  | C |
| < 70%   | F |

# Instruction Details

- Examination assessment approach
  - multiple choice
  - modified essay
  - extended matching
  - short essay/answer

# Oral Presentations

- Presented in weeks 8 to 10
- Students shall form groups (maximum 4/group) at start of term, then develop presentation on topic
- Each presentation is 15 minutes, including setup and Q&A (be quick please)
- Attendance required of all students for presentations
- Presentation content will be part of final examination content!!
- Attendees should participate in discussion

# Oral Presentations On Topic

- Topics of presentations must be relevant to course subjects (lecture topics)...some examples are
  - roles of different protein types in cell function
  - mitochondria: cell metabolism & its own genome
  - high carbohydrate & fat diet: its adverse effects
  - chromosomal theory of inheritance
  - human genome project
  - cloning
  - gene therapy



# Oral Presentation Suggested Format

- Your approach to the topic may be:
  - Introduction to topic which includes short historical background
  - Review of literature with selected but important reports highly descriptive of thesis
  - Recent advances in the field
  - Clinical correlations and significance of a basic science concept

# Communication / Interaction

- email: [shalloran@lifewest.edu](mailto:shalloran@lifewest.edu)
- phone: (916) 410-7133
- office hours: Wednesdays 12-1 pm
- office location: Room 147 (Adjunct Room)