UNIVERSITY OF CALGARY

DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. **Course:** **BIOLOGY 305 - THE HUMAN ORGANISM**

Course Email: bio305@ucalgary.ca

Lecture Section(s): L01: MWF 13:00-13:50 ST 135 Fall 2016

Course Coordinator: Dr. C. Flynn

Instructor(s):			
	Dr. C. Flynn	BI 238B	220-5055
	Dr. J. Cobb	BI 286D	220-3554
	Dr. C. Shemanko	BI 238C	220-3861

Desire 2 Learn: BIOL 305 L01 – (Fall 2016) – The Human Organism

Biological Sciences Department BI 186 403-220-3140 biosci@ucalgary.ca

2. **Prerequisites:** One of Biology 30 or 205 or 231 or 241

ANTIREQUISITE(S): Credit for Biology 305 and any of Kinesiology 259, 260, Zoology 269, 361, 363, 461, or 463 will not be allowed.

Note: Not open for credit to Honours, Majors and Minors in the Department of Biological Sciences or to Natural Science program students with a Concentration in Biological Sciences.

3. **Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Exam #1	Wednesday Oct 19th, 7:00 -8:30 p.m.	Location: ENA 201	30%
Exam #2	Wednesday, Nov 16th, 7:00-8:30 p.m.	Location: ENE 241/243	35%
Exam #3	Scheduled by the Registrar's Office		35%

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in Section 3.6. It is the student's responsibility to familiarize himself/herself with these regulations. See also Section E.3 of the University Calendar

5. **Scheduled out-of-class activities:** Dates and times of approved class activities held outside of class hours.

Exam #1	Wednesday Oct 19th, 7:00 -8:30 p.m.	Location: ENA 201
Exam #2	Wednesday, Nov 16th, 7:00-8:30 p.m.	Location: ENE 241/243

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:** Recommended Textbook:
Human Biology; Concepts and Current Issues. 8th Ed., Johnson, Michael D., Pearson

7. **Examination Policy**: Exams will consist of multiple choice and short answer questions. Non-programmable calculators will be allowed. Students should also read the Calendar, Section G, on Examinations.

8. ETHICS IN THE BIOLOGICAL SCIENCES

Studies in the Biological Sciences involve the use of living and dead organisms. Students taking laboratory- and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

9. OTHER IMPORTANT INFORMATION FOR STUDENTS:

(a) Academic Misconduct: (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under Section K. Student Misconduct to inform yourself of definitions, processes and penalties

(b) Assembly Points: In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on assembly points.

(c) Student Accommodations: Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students *with Disabilities available at http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf*.

Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy by email addy@ucalgary.ca or phone 403 220-3140.

(d) Safewalk: Campus Security will escort individuals day or night (http://www.ucalgary.ca/security/safewalk/). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.

(e) Freedom of Information and Privacy: This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also http://www.ucalgary.ca/secretariat/privacy.

(f) Student Union Information: VP Academic Phone: 403 220-3911 Email: suvpaca@ucalgary.ca
SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca;
Student Ombuds Office: 403 220-6420 Email: ombuds@ucalgary.ca; http://ucalgary.ca/provost/students/ombuds

(g) Internet and Electronic Device Information: You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

(h) At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

Department Approval ORIGINAL SIGNED Date_____

Associate Dean's Approval for
out of regular class-time activity: ORIGINAL SIGNED Date:_____

COURSE OUTCOMES:

At the end of BIOL 305, we would expect that students should be able to;

- Discuss an understanding of the scientific method, and critically evaluate scientific claims that they encounter.
- Demonstrate an understanding of the basic function of cells. Should be able to integrate and extrapolate the function of a single cell to the collective function of organs and other human systems.
- Identify and describe components of the skeletal system and development of bones. Demonstrate an understanding of the processes of development and aging.
- Demonstrate understanding of components of muscle, and be able to describe how muscle is activated. To diagnose muscular disorders and to predict changes in muscle function that results from use.
- Compare/contrast the ionic contribution to resting membrane potential and to the action potential in neurons. Demonstrate the ability to extrapolate the function of individual neurons to the network level functioning of various sensory systems.
- Demonstrate an understanding of anatomical and functional aspects of various components of the endocrine system. Integrate the roles of each component of the endocrine system and describe system wide hemostasis.
- Understand the process of cell division and differentiation. Predict malfunctions in cell division that result in cancer.

Evaluation:

Exam #1 Material covered in lectures Sept 14 – Oct 14 Wednesday Oct 19th, 7:00 -8:30 p.m.	30% Location: ENA 201
Exam #2 Material covered in lectures Oct 17 – Nov 9 Wednesday, Nov 16th, 7:00-8:30 p.m.	35% Location: ENE 241/243
Final Exam Material covered in lectures Nov 14 – Dec 9 Registrar scheduled final exam	35%

Letter grade conversion scheme for Biol 305:

Score	Letter Grade
91%	A+
86%	A
81%	A-
76%	B+
71%	B
67%	B-
63%	C+
59%	C
55%	C-
50%	D+
45%	D
below 45%	F

BIOLOGY 305 – Fall 2016

Dates	Lecture Topic	Lecturer	Reading Assignment
Sept. 12 14 16	Introduction Structure and Function of Cells	Dr. Cobb	Chapter 3
19 21 23	From Cells to Organ Systems	Dr. Cobb	Chapter 4
26 28 30	The Skeletal System	Dr. Cobb	Chapter 5
Oct. 03 05 07	Development and Aging	Dr. Cobb	Chapter 21
10 12 14	**---------NO CLASS – Thanksgiving---------**		
17 19 21	The Muscular System ****Exam #1 (7:00-8:30pm) Room: ENA 201****	Dr. Flynn	Chapter 6
24 26 28	The Nervous System: Integration and Control	Dr. Flynn	Chapter 11
31 Nov. 02 04	Sensory Mechanisms	Dr. Flynn	Chapter 12
07 09 11	NO CLASS – Reading Break		
14 16 18	DNA Technology and Genetic Engineering ****Exam #2 (7:00pm-8:30) Rooms: ENE 241/243****	Dr. Shemanko	Chapter 20
16 18 20	The Endocrine System	Dr. Shemanko	Chapter 13
21 23 25	Cell Reproduction and Differentiation	Dr. Shemanko	Chapter 17
28 30 Dec. 02	Cancer: Uncontrolled Cell Division and Differentiation	Dr. Shemanko	Chapter 18
05 07 09	The Heart	Dr. Flynn	Chapter 8