

UNIVERSITY OF CALGARY
DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. Course: **CMMB 413 – Human Genetics**

Lecture Sections: L01 TR 8:00-9:15 am ST 135 Winter 2018

Course Coordinator: Dr. Chris Wang

Instructors:

Dr. Chris Wang	clcwang@ucalgary.ca
Dr. Judy Chernos	judy.chernos@albertahealthservices.ca
Dr. Ryan Lamont	ryan.lamont@albertahealthservices.ca
Dr. Bob Argiropoulos	bob.argiropoulos@albertahealthservices.ca

D2L course name: CMMB 413 L01 - (Winter 2018) - Human Genetics

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

2. **PREREQUISITES:** Biology 311 or MDSC 341

NOTE: Students may not register in a course unless they have a grade of at least C- in each prerequisite course. See section 3.5.C in the Faculty of Science section of the online Calendar (<http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html>)

3. **GRADING:** The University policy on grading and related matters is described in “Academic Regulations, sections F.1 and F.2” of the online University Calendar (<http://www.ucalgary.ca/pubs/calendar/current/f-1.html> and <http://www.ucalgary.ca/pubs/calendar/current/f-2.html>) In determining the overall grade in the course the following weights will be used:

Midterm Exam #1	30 %	In-Class	February 1, 2018
Midterm Exam #2	30 %	In-Class	March 13, 2018
Final Exam	40%		

(There will be a final exam scheduled by the Registrar's office.)

Each component (participation, midterm exams, or final exam) submitted by the student will be assigned a percentage score. The student’s weighted percentage scores for the various components listed above will be combined to produce an overall percentage for the course, which will be used to determine the course letter grade.

Letter Grade	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Min. Percent Required	90	85	80	77	73	70	67	63	60	55	50

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. Dates and times of class exercises held outside of class hours: N/A

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.

Department Approval _____ ORIGINAL SIGNED _____ Date _____

6. Course Materials:

REQUIRED TEXTBOOK: Medical Genetics, L. Jorde, J. Carey and M. Bamshad, 5th Edition - 2016, Elsevier.

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PIAZZA LINK plaza.com/ucalgary.ca/winter2018/cmmb413

7. **Examination Policy:** No electronic or written aids (e.g. cell phones, tablets, computers, PDAs, notes, textbooks) will be allowed during writing of any exams. Non-programmable calculators will be permitted to answer quantitative questions on exams, if applicable, and permission to do this will be clearly indicated on the examination paper. Students should also read the Calendar, [Section G](#), on Examinations.
8. In this course, the quality of the student's writing will be a factor in the evaluation of this course. See also [Section E.2](#) of the University Calendar.
9. **Human studies statement:** indicating whether students in the course may be expected to participate as subjects or researchers. See also [Section E.5](#) of the University Calendar.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS.

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.

10. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Misconduct:** 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.

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

- (b) **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.
- (c) 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.

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.

Freedom of Information and Privacy: This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). 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>.

- (d) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suvpaca@ucalgary.ca
- (e) SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca;

- (f) 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) **U.S.R.I.:** 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.

COURSE OBJECTIVES:

upon successful completion of this course, students will be able to

1. provide an understanding of the genetic basis of human disease and current approaches to diagnose, treat, and prevent the genetic disorders
2. relate the study of human genetics to major advances in molecular, biochemical, and cellular genetics
3. provide an awareness of the relationship of the individual genome to the genetic makeup of the human population and its ramifications to human diversity
4. relate human genetics to current issues in genetic screening, genetic counseling and genetic engineering

CMMB 413 Human Genetics
Tentative Lecture Schedule for Winter 2018 Semester

Location: ST 135

Date	Topic	Lecturer
Jan. 09	Introduction to the Course	CW
Jan. 11	Introduction to Human Genome	CW
Jan. 16	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 18	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 23	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 25	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 30	The Chromosomal and Genomic Basis of Disease	CW
Feb. 01	Mid-term Exam # 1 – In Class	
Feb. 06	The Chromosomal and Genomic Basis of Disease	CW
Feb. 08	The Chromosomal and Genomic Basis of Disease	CW
Feb. 13	The Molecular, Biochemical, and Cellular Basis of Genetic Disease	CW
Feb. 15	The Molecular, Biochemical, and Cellular Basis of Genetic Disease	CW
Feb. 20	Reading Week (NO CLASS)	
Feb. 22	Reading Week (NO CLASS)	
Feb. 27	Population Genetics	JC
Mar. 01	Complex Traits	JC
Mar. 06	Complex Traits	JC
Mar. 08	Career Panel	JC
Mar. 13	Mid-term Exam # 2 – In Class	
Mar. 15	Molecular Genetics	RL
Mar. 20	Molecular Genetics	RL
Mar. 22	Molecular Genetics	RL
Mar. 27	Epigenetics	BA
Mar. 29	Epigenetics	BA
Apr. 03	Cancer Genetics	RL
Apr. 05	Cancer Genetics/Personalized Medicine	RL
Apr. 10	Medical Genetic Counseling	JC
Apr. 12	Lecture Overflow/Review (Q/A)	

Other Important Dates:

Jan. 19: last day to drop Winter Term courses without financial penalty

Jan. 22: last day to add, edit or swap Winter Term courses