

UNIVERSITY OF CALGARY  
DEPARTMENT OF BIOLOGICAL SCIENCES  
COURSE OUTLINE

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

Lecture Sections: L01 Tuesday & Thursday 8:00-9:15 am MFH-160 Winter 2017

**Instructor(s):**

Dr. Chris Wang	<a href="mailto:clcwwang@ucalgary.ca">clcwwang@ucalgary.ca</a>
Dr. Judy Chernos	<a href="mailto:judy.chernos@albertahealthservices.ca">judy.chernos@albertahealthservices.ca</a>
Dr. Ryan Lamont	<a href="mailto:ryan.lamont@albertahealthservices.ca">ryan.lamont@albertahealthservices.ca</a>
Dr. Bob Argiropoulos	<a href="mailto:bob.argiropoulos@albertahealthservices.ca">bob.argiropoulos@albertahealthservices.ca</a>

D2L course name: CMMB 413 L01 - (Winter 2017) - 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:

<b>Top Hat Participation</b>	<b>5%</b>		
<b>Midterm Exam #1</b>	<b>25 %</b>	<b>In Class</b>	<b>Jan. 1, 2017</b>
<b>Midterm Exam #2</b>	<b>30 %</b>	<b>In Class</b>	<b>March 9, 2017</b>
<b>Final Exam</b>	<b>40%</b>		

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

Each component (participation, midterm exams, tutorials 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.

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: <http://www.ucalgary.ca/pubs/calendar/current/sc-3-6.html>. It is the student's responsibility to familiarize himself/herself with these regulations. See also <http://www.ucalgary.ca/pubs/calendar/current/e-3.html>.

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.** 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.

Department Approval ORIGINAL SIGNED Date \_\_\_\_\_  
M413 CO W17; 05/12/2016

- 6. EXAMINATION POLICY:** No electronic or written aids (eg. 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: <http://www.ucalgary.ca/pubs/calendar/current/g.html>.
7. In this course, the quality of the student's writing in examinations will be a factor in the evaluation of those examinations. See also <http://www.ucalgary.ca/pubs/calendar/current/e-2.html>."
- 8. STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS.** Students are expected to be familiar with <http://www.ucalgary.ca/pubs/calendar/current/sc-5-1.html> of the on-line calendar. See also <http://www.ucalgary.ca/pubs/calendar/current/e-5.html>.
- 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 K. Student Misconduct (<http://www.ucalgary.ca/pubs/calendar/current/k.html>) 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 at <http://www.ucalgary.ca/emergencyplan/assemblypoints>.**
- (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](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](mailto: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](mailto:suvpaca@ucalgary.ca)  
SU Faculty Rep. Phone: 403 220-3913 Email: [science1@su.ucalgary.ca](mailto:science1@su.ucalgary.ca), [science2@su.ucalgary.ca](mailto:science2@su.ucalgary.ca) and [science3@su.ucalgary.ca](mailto:science3@su.ucalgary.ca);  
Student Ombuds Office: 403 220-6420 Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca); <http://ucalgary.ca/provost/students/ombuds>
- (g) **INTERNET and ELECTRONIC COMMUNICATION DEVICE Information.** You can assume that in all classes that you attend, **your cell phone should be turned off.** 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.

**UNIVERSITY OF CALGARY**  
**DEPARTMENT OF BIOLOGICAL SCIENCES**  
**COURSE OUTLINE**  
**CMMB 413**

**HUMAN GENETICS**

**TERM:** Winter 2017 **SECTION NO:** L01

**PREREQUISITE:** Biology 311 or MDSC 341  
A student may not register in a course unless he/she has a grade of at least C- in each prerequisite course.

**COURSE COORDINATOR:** Dr. Chris Wang  
Phone: (403) 220-3654  
Office : BI 480  
Office Hour: Tuesday and Thursday from 9:30 to 10:00 am, or by appointment  
E-mail: [clcwwang@ucalgary.ca](mailto:clcwwang@ucalgary.ca)

**LECTURES:**  
Date: Tuesday & Thursday  
Time: 8:00 – 9:15 am  
Location: MFH-160

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

**Top HAT JOIN CODE** **309418**

**PIAZZA LINK** [plaza.com/ucalgary.ca/winter2017/cmmb413](http://plaza.com/ucalgary.ca/winter2017/cmmb413)

**MARK DISTRIBUTION:**

A. Composition of Final Grade

Top Hat Participation	5%
Midterm Exam #1	25%
Midterm Exam #2	30%
Final Exam	40%

B. Final Exam  
There will be a final examination scheduled by the Registrar's Office.

**LETTER GRADE SCALE:**

90 and over = A +	77 and over = B+	67 and over = C+	55 and over = D+
85 and over = A	73 and over = B	63 and over = C	50 and over = D
80 and over = A-	70 and over = B-	60 and over = C-	under 50 = F

**COURSE OBJECTIVES:**

**upon successfully completion of this course, students will be able to**

1. to provide an understanding of the genetic basis of human disease and current approaches to diagnose, treat, and prevent the genetic disorders
2. to relate the study of human genetics to major advances in molecular, biochemical, and cellular genetics
3. to 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. to relate human genetics to current issues in genetic screening, genetic counseling and genetic engineering

**CMMB 413 Human Genetics**  
**Tentative Lecture Schedule for Winter 2017 Semester**

**Location: MFH-160**

<b>Date</b>	<b>Topic</b>	<b>Lecturer</b>
Jan. 10	Introduction to the Course	CW
Jan. 12	Introduction to Human Genome	CW
Jan. 17	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 19	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 24	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 26	Principal of Clinical Cytogenetics and Genome Analysis	CW
Jan. 29	The Chromosomal and Genomic Basis of Disease	CW
Jan. 31	<b>Mid-term Exam # 1 – In Class</b>	
Feb. 02	The Chromosomal and Genomic Basis of Disease	CW
Feb. 07	The Chromosomal and Genomic Basis of Disease	CW
Feb. 09	The Molecular, Biochemical, and Cellular Basis of Genetic Disease	CW
Feb. 14	The Molecular, Biochemical, and Cellular Basis of Genetic Disease	CW
Feb. 16	Career Panel	JC
Feb. 21	<b>Reading Week (NO CLASS)</b>	
Feb. 23		
Feb. 28	Population Genetics	JC
Mar. 02	Complex Traits	JC
Mar. 07	Complex Traits	JC
Mar. 09	<b>Mid-term Exam # 2 – In Class</b>	
Mar. 14	Molecular Genetics	RL
Mar. 16	Molecular Genetics	RL
Mar. 21	Epigenetics	BA
Mar. 23	Epigenetics	BA
Mar. 28	Molecular Genetics	RL
Mar. 30	Cancer Genetics	RL
Apr. 04	Cancer Genetics/Personalized Medicine	RL
Apr. 06	Medical Genetic Counseling	AS
Apr. 11	Lecture Overflow/Review (Q/A)	

Other Important Dates:

Jan. 20: last day to drop Winter Term courses without financial penalty

Jan. 23: last day to add, edit or swap Winter Term courses