

## BIOL 511/BIOL 481 Structural Genomics Fall 2016

### Lectures: Mon & Wed 14:45-16:00 Room: CC405

**Instructor:** Dr. Malcolm Whiteway  
 GE230.11  
 malcolm.whiteway@concordia.ca

**Prerequisite (Grad students):** BIOL 367 (Molecular Biology) or permission of the Diploma Program

**Prerequisite (Undergrad):** BIOL367, at least 60 credits in Biology majors AND permission of the instructor.

**Course description:** This course provides an overview of genome analysis including: cloning systems; sequencing strategies; approaches to mapping genomes; methods of detecting genes; genome sequence assembly; gene annotation; gene ontology; and genome evolution. It covers the theory and design of the different approaches, and the analysis of genomic data.

**Evaluation:**

**Tentative schedule  
 (subject to change)**

Instructor		% of final grade
Malcolm	Class participation/homework	15%
	midterm	20%
	Reading assignments	20%
	Oral presentation	15%
	Final exam	30%

	Date	Assignment	Topic	
1	Sep7		Course overview	
2	Sep 9		Overview of genome structure in yeast	Yeast genome 1
3	Sep 14			Yeast genome 2
4	Sep 16			Yeast genome 3
5	Sep 21		Human genome 1	Genome project overview, Mapping, Library construction
6	Sep 23			
7	Sep 28			
8	Sept 30		Human genome 2	Sequencing strategies and techniques
9	Oct 5			
10	Oct 7			
11	Oct 12		Analyzing the genome	Annotation
12	Oct 14			
13	Oct 19	Midterm exam		
14	Oct 21		Selfish DNA	
15	Oct 26		Functional RNAs	
16	Oct 28	Readings	Genomics Application	Cancer gene
17	Nov 2			Cancer gene
18	Nov 4	Readings	Genome diversity	neanderthal
19	Nov 9			neanderthal
20	Nov 11			Hapmap, 1000 genomes.
21	Nov 16			Encode project
22	Nov 18			
23	Nov 23		students	Class presentations
24	Nov 25		students	Class presentations
25	Nov 30		students	Class presentations
26	Dec 2	Last class day	students	Class presentations

## Avoiding plagiarism

Since the course work requires written effort (presentation slides and assignments), please pay attention to good citation practice. Throughout the text of any presented work, you should be clear on what part has been cited from which articles. Please visit the Academic Integrity Website prepared by Provost office. <http://provost.concordia.ca/academicintegrity/index.php>. Also, Concordia University Library has a good referencing guide <http://library.concordia.ca/research/subjects/biology/>. Watch self tutorial on how to acknowledge information sources (prepared by Concordia librarian Ms. Danielle Dennie): [http://library.concordia.ca/research/subjects/biology/plagiarism/plagiarism\\_video.htm](http://library.concordia.ca/research/subjects/biology/plagiarism/plagiarism_video.htm)

The following statements are taken from The Academic Integrity Website (<http://provost.concordia.ca/academicintegrity/plagiarism/>).

***“Plagiarism:***

*The most common offense under the Academic Code of Conduct is plagiarism, which the Code defines as “the presentation of the work of another person as one’s own or without proper acknowledgement.”*

*This could be material copied word for word from books, journals, internet sites, professor’s course notes, etc. It could be material that is paraphrased but closely resembles the original source. It could be the work of a fellow student, for example, an answer on a quiz, data for a lab report, a paper or assignment completed by another student. It might be a paper purchased through one of the many available sources. Plagiarism does not refer to words alone - it can also refer to copying images, graphs, tables, and ideas. “Presentation” is not limited to written work. It also includes oral presentations, computer assignments and artistic works. Finally, if you translate the work of another person into French or English and do not cite the source, this is also plagiarism.*

*In Simple Words:*

***DO NOT COPY, PARAPHRASE OR TRANSLATE ANYTHING FROM ANYWHERE WITHOUT SAYING FROM WHERE YOU OBTAINED IT!”***

If you are not sure how to paraphrase without plagiarizing, please refer to this example given by the Academic Integrity information site created by the Office of Provost: <http://provost.concordia.ca/academicintegrity/index.php>. Examples are shown near the end of the web page.

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- **Concordia Counselling and Development:** <http://cdev.concordia.ca/> (offers career services, psychological services, student learning services, etc.)
- **The Concordia Library Citation and Style Guides:** <http://library.concordia.ca/help/howto/citations.html>
- **The Concordia Library Biology Research Guide:** <http://library.concordia.ca/research/subjects/biology/>
- **Advocacy and Support Services** <http://supportservices.concordia.ca/>
- **Student Transition Centre** <http://stc.concordia.ca/>
- **New Student Program** <http://newstudent.concordia.ca/>
- **Access Centre for Students with Disabilities** <http://supportservices.concordia.ca/disabilities/>
- **Student Success Centre** <http://studentsuccess.concordia.ca/>
- **The Academic Integrity Website** <http://provost.concordia.ca/academicintegrity/>
- **Financial Aid & Awards** <http://web2.concordia.ca/financialaid/>
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