

SC/BIOL 2040 3.0  
Genetics

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## GENERAL COURSE INFORMATION

Course Instructor/Director: Dr. Tamara L Kelly  
Office: 108B Farquharson  
Email: [biol2040@yorku.ca](mailto:biol2040@yorku.ca)  
Drop-in question time:

**In person (108 FS):** 2:30 – 4:00 pm Tuesdays and Thursdays (hours subject to change with notice) or by appointment ([biol2040@yorku.ca](mailto:biol2040@yorku.ca))

**Online (via Moodle chat):** Friday 10 – 11:30 am (hrs subject to change)

**Lectures:** Tues. & Thurs. 1:00 – 2:20 pm, LAS C

- Please note, there are no classes on:
    - Thurs. Oct. 31<sup>st</sup> (Co-curricular Day)
    - Tues. Dec. 3<sup>rd</sup> (Study Day)
- } For both these days, I will be available for Q & A help during the regular class time (location TBA)

**Tutorials:** Tues. (9:30 am, 10:30 am, 2:30 pm, 3:30 pm), Wed. (4:30 pm). All tutorials are in LSB 107.

- **You MUST attend your registered tutorial section.** TAs have been instructed to turn away students not registered in their section, who do not have written permission from the Course Instructor or TA Coordinator to attend another tutorial section.
- **Permanent tutorial switches** will be allowed **until Thurs. Sept. 12<sup>th</sup> at 3:30 pm**. If the tutorial you want is full, you must find someone in that tutorial who is willing to switch with you. Once you have found someone, both of you need to complete a Course Transaction Form (CTF; available from Dr. Kelly). **Do NOT attempt to drop and switch labs yourselves!**
  - Each student involved in the switch must complete a CTF and the CTFs must be submitted as a pair.
  - You can submit paired CTFs to Dr. Kelly by Sept. 12<sup>th</sup> at 3:30 pm [before/after class or to her office in 108 FS (the Undergraduate Biology Office)]. Do **NOT** leave CTF forms under the door of 108 FS (the office closes at 3:30 pm) at *anytime*; they will be put into the garbage and no tutorial switch will occur.
  - The switch will be completed by the administrative staff in the UG Biology Office on Sept. 13<sup>th</sup>. Do not email or call them to check the status, simply check your records the following Monday.
- Please note that tutorials are held in a very short time frame, thus, makeup tutorials may not be possible.
- **Makeup tutorials may be available for students with valid reasons for missing their tutorials.**
- If you do not have a valid reason for missing your tutorial you will receive a zero (0) for the assignment in the tutorial. Reasons not considered valid include schedule confusion, missing the bus, busy lives, etc.
- If you miss your tutorial, DON'T just drop by the next scheduled tutorial. **Contact the TA Coordinator (Larissa McKetton) immediately at [biol2040@yorku.ca](mailto:biol2040@yorku.ca) regarding missed tutorials.**
- You are allowed 1 temporary switch per term.

## COURSE TOOLS & LEARNING MATERIALS

- **Text:** Griffiths *et al.* (2012) Introduction to Genetic Analysis, 10<sup>th</sup> ed. WH Freeman & Company.
  - There are a variety of purchasing packages available at the bookstore (hardcopy, binder copy, e-text, etc.)
  - This is the same text edition as W2013, so there should be used copies available.
  - Please note that the e-text has certain date restrictions (It is good for a year). Find out this information *before* you make the decision to purchase one version of the text over another.
  - A few copies of the textbook are available on [short-term reserve in Steacie Library](#) (2-hour reserve times)
  - You can use a previous edition of the text, but it is not recommended. If you use a previous edition or another genetics text, **but you are responsible for using the index/table of contents to determine relevant portions of your book.** Again, there are copies of our current text on reserve in Steacie.
- **Student Solutions Manual:** for Griffiths *et al.*, 10<sup>th</sup> ed. WH Freeman & Company

- The solutions manual will be on reserve in Steacie Library for 2-hour reserve times.
- **Turning Point clicker** (with or without LCD screen)
  - Most of you will have your clickers from BIOL 1000/1001 (if so, it should already be registered). Clickers can be purchased through Computing Services (<http://www.yorku.ca/prs/students/purchase.htm>) purchased for \$42 (taxes included). **Clickers should be purchased by Thurs. Sept. 12<sup>th</sup> to use in class that day; they should be registered by Mon. Sept. 16<sup>th</sup> at the latest.** See <http://www.yorku.ca/prs/students/register.htm>. See General Clicker Information document on course Moodle site for additional information.
- **Course Website:** the BIOL 2040 Moodle site will include all announcements, course materials, online quizzes, resources, discussion forums, and information regarding tutorials. <http://www.yorku.ca/moodle/>

## COURSE OVERVIEW

### COURSE GOALS

Upon successful completion of BIOL 2040 3.0, students will be able to:

- Relate concepts from BIOL 1000 and 1001 to those in BIOL 2040.
- Communicate information, arguments, and analyses accurately and reliably in verbal and written form during class/tutorial activities, and on assignments, quizzes, and exams.
- Work effectively with others in a tutorial, class, and exam setting.
- Use genetic terminology in its correct scientific context.
- Describe the molecular anatomy of genes and genomes.
- Compare different types of mutations and describe how each can affect genes and the corresponding mRNAs and proteins.
- Explain the molecular basis, at the protein level, for alleles with different genetic outcomes.
- Describe the mechanisms by which an organism's genome is passed on to the next generation.
- Describe the phenomenon of linkage and how it affects assortment of alleles during meiosis.
- Describe the approaches and methods used to conduct genetic studies in model organisms.
- Justify the value of studying genetics in organisms other than humans.
- Analyse phenotypic data and deduce possible modes of expression/inheritance (e.g., incomplete dominance, autosomal, X-linked) from family histories (pedigrees).
- Extract information about genes, alleles, and gene functions from genetic crosses and pedigree analysis.
- Interpret results from molecular analyses to determine the inheritance patterns and identities of human genes that can mutate to cause diseases.
- Apply the results of molecular genetic studies in model organisms to understand aspects of human genetics and genetic diseases.
- Describe the processes that can affect the frequency of phenotypes (and genotypes) in a population over time.

*Additional learning objectives will be provided for individual topics throughout the course.*

**Calendar Description:** A study of the organization and behaviour of genes and chromosomes; and their roles in cells, organisms, populations and evolution. Three lecture hours, one tutorial.

**Prerequisites\*:** SC/BIOL 1000 3.00 and SC/BIOL 1001 3.0; or SC/BIOL 1010 6.0

**Course credit exclusion:** SC/BIOL 2040 4.00

\* Pre-requisites will be strongly enforced; you will be de-enrolled from the course if you lack the necessary pre-requisites or transfer credits.

BIOL 2040 (Genetics) is a course designed to help you explore, understand, and apply the foundations of genetics. In this course, we'll be looking at genetics as a method of scientific discovery to solve problems in terms of health and disease, as well as modelling evolutionary processes. Some of the concepts we discuss will seem quite familiar, but if you don't really get them, you won't really understand any of the higher-level concepts. So, that being said, approach this

course with an open mind. If we review something, and spend time on it, try to consider why it might be important to review the concept. In this course we'll be moving beyond the basic terminology, but having a firm grasp of that terminology is *absolutely essential* for success in building a conceptual understanding of genetics. Conceptual understanding of the foundation of genetics is necessary to understand genetic diseases (including non-hereditary ones), breakthroughs in modern medicine, and risks to species on Earth.

### EVALUATION (tentative – will be finalized by Sept. 22<sup>nd</sup>)

Assessment will be formalized by Sept. 22<sup>nd</sup>, but will likely resemble:

Midterm I:	18%	Thurs. Oct. 10 <sup>th</sup>
Midterm II:	21%	Tues. Nov. 12 <sup>th</sup> (Please note that this is after the drop deadline!)
Final exam:	30%	(cumulative; during December exam period)
Floating 3*:	3%	
Activities**:	10%	
Clickers/In-class, etc.	5%	
Reading quizzes	5%	
Tutorials:	<u>18%</u> (mandatory, even if repeating the course)	
	100%	

- **\*Floating 3:** This is added to weighting of whichever of the 3 tests you do best on. This is **NOT** a free 3%. If, of the three exams, you do best on Midterm II, then your midterm II will be worth 25% of your course mark, not 22%.
- **\*\*** Many items in this category will include points for participation/completion (e.g., clicker questions), while others are marked on the basis of a correct answer (e.g., reading quizzes). **The lowest 20% of the clicker questions/quiz questions (including zeroes) will be dropped from your score** to account for missed classes (e.g., due to illness, sleeping in really late, missed bus), forgotten clickers, technical issues with the quizzes, etc. **Because this marking scheme takes into account potentially missed classes, forgotten quizzes, and technical issues, doctor's notes, etc., will not be accepted.** See **Course Policies** (p6) and **Activities Info** (separate document) for more information.

### COURSE COMPONENTS

Many of the course components of BIOL 2040 will seem familiar to those of you who recently completed BIOL 1000/1001. Throughout the term you are provided with a list of **course and topic-specific learning outcomes** upon which tests are based. Some outcomes are addressed via **assigned readings** (posted on Moodle), while others are addressed, or expanded upon, during class time/tutorials. As in BIOL 1000/1001, we'll be using clickers in BIOL 2040 to provide feedback as to how well you understand the material and help reveal misconceptions. Because most of you already have clickers and they are *really* useful in helping you to gauge your understanding, we'll be using them the first week of the course (see Course Policies #3). As well, there are weekly **reading quizzes** (on Moodle) on assigned readings (from the text, material posted on Moodle, etc.); these will help you stay on track in terms of the reading (and thus be less overwhelmed when midterm time rolls around), as well as prepare you for the lectures so that we can use lecture time optimally—that is, to help you work on the more difficult aspects of genetics. You are expected to complete the readings and quizzes and come to class prepared. Reading quizzes aren't difficult, and test you on definitions of terms and basic comprehension of concepts. This means that you won't see a lot of this lower-level material on tests and the final because it's already been tested. As well, reading quizzes may also contain questions that review material from the previous weeks', allowing you to determine if you understand the material we've already covered. **Mandatory tutorials** will help you practice problem-solving strategies, both individually and as part of a group. As well, tutorials will provide you with practice working as part of a group (which is a skill!). Tutorials will provide you with TA guidance and the opportunity to receive feedback on your problem-solving and group-work skills and improve upon them.

- **Lecture Notes**

If lecture notes are available before lecture (which I cannot guarantee) you can print them out and add your own notes to them. I will try to post slides ahead of class, however, this may not always be possible. **If the slides aren't posted ahead of class, it means they aren't done, so asking me to post them is a unhelpful. Please do not email**

me to request that slides always be posted ahead of class (there's no evidence in the literature that it helps with your learning; remember the notes YOU make are the most valuable in terms of learning the material). Slides will be posted as pdfs, either in 1 or 2-slide per page format. (You can always print more slides per page by adjusting your printer settings). I typically update notes after class with slides I didn't post beforehand, as well as the clicker questions. Answers are not provided for the clicker questions in the lecture notes. If you missed class and want to inquire as to the answer, you can ask a friend or post the question on the Moodle forum, as well as your reasoning for which distractor is the answer. Requests that simply ask what the answer is will be removed from the forum and earn my ire.

### *The Exams*

Last, but not least are the exams, which allow me to formatively (during the course; allow feedback you can use to improve) and summatively (final exam) assess your understanding of the principles of genetics and their applications. Exams are based on the learning objectives/course goals, held during class time, and will consist of multiple-choice and short answer questions. Other than that, **they're likely not like other exams you've written**. Yes, you have to study for them. And yes, they have a time limit. But you might leave them happier than you've left other exams and you'll have improved your mark and your understanding of the material. **How, you ask?** (Well you might not have asked, but you should have...) Your midterms and your final exam will be 2-stage exams. This means they'll be written in two-parts during the exam time. During the first part you'll complete the exam on your own; **after the individual portion is done, you'll get into groups of four** (of your own choosing), **and complete the same** (or very similar) **test in a group**. Why do this? Research shows that this form of assessment results in improved student learning. As well, you'll work on skills such as working as a group, coming to a consensus as a group, listening skills, discussion skills, the ability to articulate ideas. These are all transferable skills that are desired by employers and professional schools. And none of this comes at the risk of your mark being lowered. In our 2-stage exams, your individual portion will be worth 85% of your grade for that test; the group mark will be worth 15% of your grade for that test. The best part? Your group mark can **only improve** your grade! In this way, our exams mirror the collaborative exercises in class and tutorial and the collaborative exercises in class and tutorial help you develop skills useful in the exam. (See **Accommodations, p7, if you write with Alt Exams**.)

### *The Link between the Tutorials and the Exams*

To give you practice with the 2-stage approach, most (or all) of your tutorials will use the 2-stage approach. You'll be given questions on material that you complete on your own. Then you'll assemble into groups (sometimes of your own choosing; sometimes TA-assigned) and you'll complete the same assignment (or a variant thereof). Your TAs are there to provide guidance and to help you figure out answers. They are not there to **tell** you answers (because even though that might benefit you on your tutorial mark, it will be a detriment for your exam mark; your exams are more than half of the weighting for your course grade).

## **COURSE POLICIES (READ THESE)**

### **1. EMAIL ETIQUETTE:**

- Use only the course email address (biol2040@yorku.ca) to contact the Instructor and TA Coordinator. **Emails pertaining to BIOL 2040 sent to personal @yorku.ca email addresses will not receive a response.**
- Do not use the Moodle email function to contact the Instructor unless she contacts you using this function. Otherwise, you will not receive a response.
- Email contact must be from an @yorku.ca email address. Emails sent from non-YorkU email addresses (e.g., Hotmail, Gmail) are filtered out by the university's email system and typically don't reach their intended recipient. **Emails from addresses other than an @yorku.ca email will NOT receive a response.**
- Email contact to [biol2040@yorku.ca](mailto:biol2040@yorku.ca) must include the following in the **subject line**: **your name, student number, and whether the email pertains to lecture or tutorial, and a brief indication of the topic**. We receive **a lot** of email and this practice helps us sort emails efficiently.
  - E.g., Subject: Tamara Kelly 123456789, Lecture - meiosis question
  - **Emails without the required information will not receive a response.**

- TAs will provide contact information in the first tutorial; when contacting your TA, you must include the following in the subject line: course code (BIOL 2040), your name, student number and tutorial section.
- We will **try to respond to your email within two (2) working days (48 hours)**, but this is not always possible.
- Before emailing your instructor, **consider the nature of your question and whether another resource should be consulted first.** E.g., tutorial-related queries about a missed tutorial should be directed to the TA Coordinator, not the Course Instructor. **Don't be surprised if you don't receive a response to a question that could be easily answered by looking at the Course Outline or the Moodle site.** It's your responsibility to read all the information provided. Also, don't write to the instructor asking what you missed in class—ask classmates instead.
- If you have a question that's long and convoluted, then attend Drop-In hours. Many questions can't be answered adequately via email, so don't be surprised if I suggest coming by during Drop-in hours.
- The instructor may answer your question in the next class if appropriate. Questions and answers deemed of interest to the entire class will be posted (with personal identifiers removed) to the appropriate discussion forum thread or sent via course announcements if urgent. **In fact, I would encourage you to make use of the discussion board to pose your questions. Chances are high that someone else in the class has the same (or similar) question and can benefit from a classmate or instructor answering it on the forum.**
- Do NOT respond to course announcement emails!

## 2. MISSED MIDTERMS/FINAL:

- If you are ill, do not enter the exam room; once you have written an exam, you mark will stand regardless of the reason you may have once the exam is over. Please note, you will be required to present acceptable documentation (see below).
- You **MUST** contact (email) your instructor **within TWO (2) days (48 hours) of missing a midterm exam.** If you miss a test with a legitimate documented reason, permission may be granted to take a makeup test (if applicable). **All documentation** supporting your excuse for missing a test must be received by me at 108 FS **within ONE (1) WEEK of the missed test** (or as soon as you are able to return to school if you are sick for more than a week), but students should contact me as early as possible after a missed test.
- Only the 2013 version of the 'York Attending Physician's Statement Form' (can be downloaded as part of the Petitions Package or from [http://www.registrar.yorku.ca/pdf/attend\\_physician\\_statement.pdf](http://www.registrar.yorku.ca/pdf/attend_physician_statement.pdf)) OR a similarly detailed doctor's note (i.e., NOT a form stating only that the student visited the clinic) will be accepted for medical excuses. Documentation must cover the date of the missed test. Death of an immediate family member requires a death certificate or letter from the funeral director. Makeup tests may differ in format from the original test (i.e., include more short/long answer questions, not be 2-stage format etc.). If appropriate documentation is NOT provided within ONE (1) week, a zero will be earned on the missed midterm.
- As Course Director, I have final say on whether a student is eligible to receive a makeup test. **NOT** all situations will be accommodated; those that aren't will earn a zero (0) on the missed midterm. Circumstances not accommodated include, but are not limited to: schedule confusion, sleeping in, missing the bus, rain or snow/ice causing increased travel time to campus, personal endeavours (including a job), busy lives (including too many assignments or tests that same week/day, etc.) Makeup exams can be a different format than the original test.
- **Final Exam** All students who miss the final exam must formally petition if they are seeking deferred standing. No student will be granted deferred standing by the instructor [via the Deferred Standing Agreement Form (DSA), <http://www.registrar.yorku.ca/exams/deferred/>]. You must submit a petition to your home faculty **ONE (1) week** of the missed exam. Please note that doctors' notes are NOT sufficient for missed final exams; your doctor must complete the Attending Physician's Statement included in the petitions package (<http://www.registrar.yorku.ca/petitions/academic/>). An academic committee will decide whether or not permission to write is granted based on the situation presented; if deferred standing is granted, the committee will also set a deadline for writing of the deferred exam. **Denied petitions will result in a zero on the final exam.** See <http://www.registrar.yorku.ca/petitions/academic/> for information.
  - The format of the make-up final exam may be essay, short answer, and/or multiple-choice.

### 3. CLICKERS:

- Write your name on your clicker (permanent marker, or make a label). This has been invaluable in returning lost clickers to their bereft owners.
- **Write down your clicker ID number and keep it in a safe place. (Do. This. NOW.)**
- It is your responsibility to register your clicker online (see <http://www.yorku.ca/prs/students/register.htm>). Your clicker **MUST** be registered by Sept. 16<sup>th</sup>. **Failure to register your clicker will result in the loss of clicker participation marks.**
- If you **replace** your clicker, you **must register it immediately**, and inform your instructor (by email: [biol2040@yorku.ca](mailto:biol2040@yorku.ca)) within 1 day of replacing your clicker.
  - Your email must include your name, student number, and section (in the subject line, as per #1), your **old clicker ID number, and your new clicker ID number**. Both ID numbers are required to transfer your clicker marks to the new ID number. Failure to communicate this information will result in the loss of participation marks until you have done so.
- Clicker marks are gained on the basis of participation. Because the nature of the clicker/quiz marking scheme takes into account missed classes for various reasons (ill, appointments, etc.) by dropping the lowest 20% (*i.e.*, you must participate in at least 80% of the questions to receive full marks), doctor's notes and other documentation will **NOT** be accepted for missed classes. That is, to earn the full 5%, you must complete at least 80% of the total number of clicker questions for the term. (Each clicker question is worth 1 point.)
- **NOTE: Students must use their own clicker. Use of a clicker not registered to you (or answering clicker questions for a friend) is considered a breach of Academic Honesty and will be reported to the Associate Dean, Faculty of Science.**

### 4. READING QUIZZES:

- Quizzes will occur weekly and will **mostly** deal with readings to prepare you for the upcoming week of classes, however, some review questions may be included, and may include readings (or videos) other than your textbook.
- With the exception of a participation point in each quiz (you must complete the appropriate question to gain this point), marks are awarded for quizzes on the basis of a correct answer.
- You have one try and a limited amount of time in which to complete the quiz. Please note the deadline for each of the quizzes. If you are completing a quiz when the deadline passes, you will receive no marks for that quiz.
- Save your quiz answers as you work your way through the quiz.
- Reading quizzes comprise 5% of your total grade. In order to get the full 5%, you must earn 80% of the total number of quiz points (with the exception of the participation 'question', each quiz question is worth 1 point and awarded on correctness).
- If you are having issues with a quiz (can't see questions), please check your browser settings (particularly if you have done a software update) (see <https://moodle.yorku.ca/students/documentation/index.html>). Contact [ithelp@yorku.ca](mailto:ithelp@yorku.ca) (or 416-736-5800) for any technical inquiries.

### 5. EXAM MARKS & REVIEWING EXAMS:

- Exams typically take at least 2 weeks to mark. This is because even for tests with only multiple-choice questions, Scantron files must be reviewed. Posting impatient remarks (in email, forums, etc.) about exam marks, does **not** make the process move any faster.
- Marks will be posted in Moodle. **Exam marks are not negotiable.** Please see #6 if you think there has been an error in your exam mark calculation.
- Exams will not be handed back to students, but you will have opportunities to review your exams. These dates will be posted on Moodle. If you have a concern about marking of a short-answer question, please see #6.

## 6. REAPPRAISALS/MARK CALCULATION ERRORS:

- If you believe a written answer on a test was marked incorrectly you must submit a reappraisal request form, available from 108 FS, detailing your rationale (based on academic merit) to the Undergraduate Biology Office (108 FS) within 5 business days of the test mark being made available to you. **ONLY** those answers written in ink are eligible for re-marking. **NOTE: re-marking can result in the mark being raised, confirmed, or lowered.**
- To be fair and consistent with regards to the entire class, **individual grades are NOT negotiable.** We cannot provide 'extra credit' assignments. Marks for assignments and tests are not 'rounded' or 'bell-curved' (you don't want them to be...). **Contact me about marks ONLY if there is a clear error in your mark (calculation, clerical, etc.) as soon as possible within ONE (1) week of the test score being made available to you.** It is highly unlikely that you will receive a response regarding any other mark-related queries.

## 7. FORUM CODE OF CONDUCT:

- Students are **encouraged to participate in the online Moodle Forums** to discuss course concepts, organize study groups, and ask questions relating to Genetics. The discussion on the forums has typically been polite and respectful, and we hope this will continue. Students are expected to follow these guidelines while using the Moodle forums:
  - i. Before posting a question, **read other threads** to see if your question has already been answered. (You can search the forums—you don't have to read each post!). If your question hasn't already been asked, please post in the most appropriate forum. Posts put in the inappropriate forum will be deleted. **Don't start a new thread for a topic that already exists!**
  - ii. Use a clear, informative subject line. Try to be as specific as possible.
  - iii. Post comments appropriate to the particular discussion. **Off-topic posts may be moved or deleted.**
  - iv. **Be respectful:** your instructor has provided this space for you to discuss course material with your classmates. Posts containing personal insults/attacks/intimidation/inappropriate language/profanity will be removed. **(It is worth remembering that your instructors read forum posts!)**
  - v. Post only material relevant to BIOL 2040. Other posts are likely to be deleted.
  - vi. While it is appropriate to engage in debate/discourse on biological topics, such discussions should be respectful and evidence-based. Evidence should be from trusted sources—consult with the library or your instructor if you are not sure. (See: <http://www.yorku.ca/webclass/module4a.html>)
  - vii. Any posts that appear to violate our code of conduct may be edited, moved to a hidden forum, or deleted at the discretion of instructors/moderators. If posts give indications of violations of academic honesty or the York University Student Code of Conduct (: <http://www.yorku.ca/oscr/codeofrr.html>) further action will be taken.
  - viii. If you notice any inappropriate threads please contact the Course Director.

*Disclaimer: While Moodle moderators/instructors will attempt to remove/edit objectionable/inappropriate material as quickly as possible, it is not always possible to review every post in a timely manner. All posts made on the forums express the views and opinions of the post's author and not the moderators/instructors (except for posts by these people) and they cannot be held liable.*

## 8. ACCOMMODATIONS:

- **Submit CDS Accommodation letters by Sept. 13, 2013.** These can be given to me in class or dropped off to 108 FS (the Undergraduate Biology Office), with instructions to place them in my mailbox. Please email both the instructor and TA Coordinator to make us aware of accommodation letter submissions.
  - **If you are writing with Alt Exams:** Because we are using 2-stage tests in this class, this means that if you are writing with Alt Exams, **you will need to be back in our classroom in time for the group part of the exam.** Typically, the individual part of the exam is allotted between 35 and 40 mins, so you should schedule with Alt Exams accordingly.

- Please make the instructors (and TA Coordinator if labs are affected) aware of any religious observance conflicts occurring at any point during the term, for which accommodations will be required (no accommodations will be made for clicker questions; please see above), by Sept. 13, 2013. Submit supporting documentation to the Undergraduate Biology Office (108 FS).  
<https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs>
- Students who feel that there are extenuating circumstances that may interfere with their ability to successfully complete the course requirements are encouraged to discuss the matter with the Course Director as soon as possible. <http://www.yorku.ca/univsec/senate/committees/sac/sturesp.htm>
- **Please note:** "Senate policy states that students are expected to monitor their progress in courses, taking into account their personal and academic circumstances, and to make the necessary adjustments to their workload to meet the requirements and deadlines." (from Senate Policy of Students' Responsibilities in the Petition/Appeal Processes). **The drop deadline is November 8, 2013.**
- Students with physical, learning or psychiatric disabilities who require reasonable accommodations in resources or evaluation methods are encouraged to consult with the Office for Persons with Disabilities (OPD) and ensure that requests for appropriate accommodations are arranged with the Section Instructor early in the term.

#### 9. ACADEMIC INTEGRITY:

- Students are expected to be familiar with and follow York University's policies regarding academic integrity. Please consult the lab manual and website below for more details:  
<http://www.yorku.ca/academicintegrity/students/index.htm>
- Student information sheet, see: <http://www.yorku.ca/secretariat/policies/document.php?document=69>

#### RECOMMENDATIONS FOR SUCCESS:

- Genetics is based on logic, hence the emphasis on problems and problem-solving. **Ergo, do suggested problems.**
- **Watch your vocabulary!** Your biology (genetics) vocabulary that is. Biology uses words that may seem quite familiar to you, in very specific ways. This can create confusion, particularly with respect to words that are often used in everyday language. Make sure when you are reading the text, listening in lecture, and studying that you are thinking of the appropriate scientific definition. You should practise your biology vocabulary, just like you would a foreign language.
- **Look up words you don't know in the text glossary.** If you look up words online, make sure the definitions come from a reliable source.
- **Study in groups!** What one person doesn't understand, another may be able to teach. Research has shown that helping each other to learn (*i.e.*, study) improves marks on both sides: for the person being helped and the person explaining the concept. This is also the rationale behind 2-stage exams. Attend PASS sessions for group study.
- **Attend the PASS and Peer Tutoring sessions at Bethune!**
  - PASS schedule <http://bethune.yorku.ca/pass/> Tuesdays 5:30-7 pm BC 203; Fridays 2:30-4pm BC 230); PASS Leader is Ryan Patak - contact him through the Facebook page below.
  - Peer Tutoring schedule <http://bethune.yorku.ca/tutoring/>
  - PASS/Peer Tutoring Facebook page: <https://www.facebook.com/groups/679272702101792/>
- **Draw it out!** Take problems and sketch them out. This is especially useful when looking at problems involving crosses or movement between populations. Don't try and rely on keeping everything straight in your head.
- **Take notes in class.** Instructors discuss/explain concepts that are not elaborated upon in the text or in the powerpoint notes. Lecture notes provided by the instructor are there only as a skeleton guide; **they are not a complete set of notes.**
- **If you have a question in class, take note of it and ask it.**
- **This course will test your knowledge and understanding of fundamental genetics concepts, in addition to your ability to read/interpret test questions. Read test questions carefully and answer the question being asked. For**

short answer questions, do NOT simply look for a keyword and then regurgitate all you ever learned, or wish you learned, about that word. That being said, I'll try to write questions in a clear manner. If you're at all confused, ask a TA or the instructor for clarification.

- **Use the learning outcomes to prepare for tests.** For your tests/exams, you will need to know the learning outcomes. **Do NOT memorize your text and/or lecture notes. Don't just reread your notes—we know it doesn't work (Dunlosky & Rawson, 2005)!** (Rather, work through the learning objectives using your notes from the text and lectures.
  - **Attempt to answer each learning goal** – generate your own answer.
  - **Look at the course resources** (text, clicker questions, tutorial questions, lecture notes—both mine and yours) to check your answers and to answer outcomes that you're struggling with. Again, don't simply reread!
  - **Take a look at clicker questions, suggested practise questions, tutorial questions, and try to match them to the learning outcomes.** Use these to test yourself (e.g., create your own answers before looking at the given answers or asking a friend). **Think of other questions that could test this same learning outcome;** are there other ways you could be asked to show that you could complete that LO? Use the questions you come up with to test yourself; share questions with people from class.
- **Tempted to defer?** History says you shouldn't. On average, deferred exam marks are 10-15% lower, even if writing the exact same test. Sure, you might feel a bit unprepared, but students don't study given more time. Face it, we're all human and procrastination is one of those things we're quite attached to.
- **Prioritize!** Use the weightings of course assessments to prioritize your time and effort. University is about learning to manage your time—it takes practice!
- **Guidelines for answering exam questions:** exams will consist of multiple choice questions (i.e., choose the best answer), and short answer questions (that may include defining terms, explaining, and application of concepts) All will require more than regurgitation of information. Keep in mind the following as you answer questions:
  - To answer exam questions correctly, you must read them carefully and consider exactly what is being asked. The importance of knowing exactly what a question is asking cannot be overstressed. Ask an instructor if you are unsure (but remember, we can only guide you so much). The key here is to practise answering questions throughout the term [e.g., clicker and quiz questions, those from your textbook (multiple choice AND conceptual, short answer questions), and questions that you and your peers create].
  - **Multiple-choice questions** – each question is worth 1 mark. Thus, you should work your way through your test answering all questions that you can. Mark those that you cannot answer, and return to these later. You do not have to answer the questions sequentially—this means that you shouldn't spend 15 minutes on a question early on in the test to the detriment of answer other questions.
  - **Short answer** – provide answers in **clear, legible writing/printing** (if we can't read it, we can't mark it), and in sentence form. Point form is acceptable, but you are responsible for demonstrating the link between points, and each point must be a complete idea (i.e., sentence). A question worth 2 points typically requires 2 clear and pertinent points that are clearly linked, demonstrate coherence, and do not repeat each other.
    - Don't think that simply regurgitating information from the text/lecture provides a suitable answer. You must **answer the question being asked** and in your OWN words.
    - Brevity, while still answering the question, is rewarded. We try to limit how much you can write by providing you with a space that reflects the length of the answer required. Don't try to squeeze in 14 lines for a question worth 2 marks (and in a space that looks like it would only comfortably accommodate 2 or 3 lines). **Don't re-write the question—this takes up precious space and time!**

**We wish you great success in BIOL 2040!**

**If you need any help, please contact the appropriate individual.**