Biology 3592a - COURSE OUTLINE

Important Dates
Lectures begin: Sept 6, 2018
Tutorials begin: Sept 12, 2018
Fall Reading Week: Oct 8-12, 2018
Classes end: Dec 7, 2018
Study Day: Dec 8/9, 2018
Examination Period: Dec 10-21 2018

1. General Course Information

Professor: Dr Kathleen Hill khill22@uwo.ca ; Associate Professor in Biology

Course Title: Human Genetics - 3592a Fall 2018
Lecture location: Natural Sciences Building Room 7 (NS7)
Lectures: Tuesdays and Thursdays 1:30 to 2:20 pm
Tutorial: Wednesday 11:30 to 12:20 pm SEB 1200 All sections combined
(see posted calendar schedule for lecture and tutorial topics along with the midterm test date and assignment/quiz due dates) – to be posted to OWL course website

Course OWL Website: https://owl.uwo.ca/portal

To access course content: Enter your UWO username and password; Biology 3592a should be a selection in your class list. Students should check OWL (https://owl.uwo.ca) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. Students are responsible for checking OWL on a regular basis.

Prerequisite Requirements
Prerequisite(s): Biochemistry 2280A; Biology 2581A/B.
Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

2. Instructor Information
Kathleen A. Hill - khill22@uwo.ca
Students must use their Western (@uwo.ca) email addresses when contacting instructors and teaching assistants.

Office: Western Science Centre Room 333
Office hours: Wednesdays 1 to 2pm Western Science Centre Room 333

Teaching Assistants [TAs]:
Rachel Kelly: rKelly66@uwo.ca
Hailie Pavanel: hpavanel@uwo.ca
TA Help sessions: dates and locations will be posted to the OWL course site and are concentrated closer to the midterm test and final exam dates.

3. Course Description/Syllabus
Genetic principles and their application to humans. Special attention will be directed to the genetic variation in our species, mutations, mechanisms of gene expression, and mapping the human genome.
Antirequisite(s): None
Prerequisite(s): Biochemistry 2280A; Biology 2581A/B.
Corequisite(s): None
Pre-or Corequisite(s): None
Extra Information: 2 lecture hours, 1 lecture/tutorial hour, 0.5 course.

Key Topics:

- De novo mutations, somatic and germline mosaicism
- Historical challenges and future projections for human genetics
- Technologies and methods in human genetics research
- Clever experimental designs in human genetics research
- Anatomy of a human gene, human chromosome and human genome
- Glossary of terms commonly used in human genetics
- Models for human genetics research
- Chromosomal anomalies
- Mutational mechanisms
- Mobile elements in the human genome
- Genetics and language
- Personalized and precision medicine
- Case studies of human genetic diseases
- Human genome editing
- Ethical dilemmas in human genetics and genomics

Learning Objectives and Course Outcomes:

On successful completion of this course students will be able to:

- Write effectively
- Design a conceptual science abstract
- Perform effective searches in reputable internet sources
- Use Mendeley software for citing literature and preparing a reference list
- Work effectively in a team
- Construct and interpret pedigree charts
- Use and interpret human chromosome and karyotype nomenclature
- Teach the anatomy of a human gene
- Explain how mobile elements alter the human genome
- Teach The Central Dogma
• Describe genome editing methods
• Describe and illustrate a diagram for common methods of mutation detection and gene/genome sequence analysis
• Join the conversation and identify ethical challenges presented by advances in human genetics/genomics research and its translation to the clinic and marketplace
• Identify the science, technology, stakeholders and issues in current bioethics challenges
• Understand, discuss and debate current topics in bioethics associated with human genetic/genomic technologies
• Describe genomic instability associated with cancer
• Describe what is meant by personalized or precision medicine

Where to get HELP

Study Strategy for Lectures: Read and be prepared to ask and answer questions related to each required reading prior to each lecture. Each of the required readings is available from the Biology 3592a OWL website. Additional background readings may also be provided to assist in understanding the required readings.

Background Material Helpful to Review

Helpful Textbooks:
Biology 2581b text: Genetics: from Genes to Genomes Hartwell et al.; Jones and Bartlett Publishers; Copies are on reserve in the Taylor Library

Genes X [Lewin] is on reserve in the Taylor library (2 hour loan)

Genes IX [Lewin] is on reserve in the Taylor library (2 hour loan)
Previous editions of Genes are in the Taylor library (2 hour loan)

Helpful online resources:
Genomes [2nd Ed] available online:
Relevant chapters recommended: Chapters 1, 2, 4-8, 14.

There are several online texts that contain helpful information and explanations for the fundamental principles taught in this course. The online books have a nice search tool so you can rapidly find text relevant to the course topics. I recommend using this search tool for concepts mentioned in the readings and lectures to help find definitions and helpful figures to explain basic concepts and fundamental principles.

Modern Genetic Analysis:
https://www.ncbi.nlm.nih.gov/books/NBK21248/

An Introduction to Genetic Analysis, 7th edition:
https://www.ncbi.nlm.nih.gov/books/NBK21766/

Writing Support Centre – Student development Centre
Home page: http://sdc.uwo.ca/writing/
Writing Support Centre Services available:

Writing Resources: Writing Support Handouts in Word and pdf format ready for download
http://www.sdc.uwo.ca/writing/undergrads/writing_resources.html

Online Writing Help: http://www.sdc.uwo.ca/writing/undergrads/online_writing_help.html

Weldon Drop-in Services: http://www.sdc.uwo.ca/writing/undergrads/dropin_services.html

One-to-one Appointments with a writing advisor: http://www.sdc.uwo.ca/writing/undergrads/appointments.html

4. Course Materials

There is no textbook for this course

Instead of a course textbook ‘Required Readings’ are used. These readings are recent [primarily 2018] published reviews and primary research articles. The PubMed ID#s for these “Required Readings” are posted to the OWL course site.

The course OWL site contains the following:

- Course outline
- Required readings
- Lecture and Tutorial Schedule
- Lecture and Tutorial Slides
- Tutorial Workshop Guidelines
- Assignment Guidelines and Rubric
- Helpful resources
- Exam preparatory materials

Students should check OWL (http://owl.uwo.ca) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. Students are responsible for checking OWL on a regular basis.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

<table>
<thead>
<tr>
<th>Participation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*OWL Assignments (5%) and Quiz Grades (10%)</td>
<td>15% Dates: on OWL</td>
</tr>
<tr>
<td>*Phenotyping Contribution</td>
<td>5% Due date: Nov 1</td>
</tr>
<tr>
<td>Midterm Test [in class]</td>
<td>25% Date: Oct TBA</td>
</tr>
</tbody>
</table>

**Report

*Human Genetic Disease Report and Conceptual Abstract 15% Due Date: Nov 8

Final Exam [cumulative over the semester inclusive of tutorial and lectures] 40% Date: Dec TBA

*Instructions delivered in lecture or tutorial and posted to OWL

**Rubric will be posted to OWL for the Report
Expectations and Strategies for Success

Student Participation

It is expected that students have read the required readings prior to the lecture discussions and it is expected that all students attend lectures and tutorials. Participation is expected in several areas of the course e.g., attending lectures and tutorials, participating in class and tutorials and submitting assignments by assigned deadlines according to posted instructions.

Suggested study strategies will be posted for the quizzes, midterm test and final exam. “In class” and “in tutorial” review sessions will be held for tutorial and lecture content review. A rubric will be provided on the OWL course site for the report.

Quizzes will consist of up to 12 True/False, Multiple Choice or Matching questions where answers can be selected from online options [Quizes are delivered through OWL]. Quizes test understanding of Tutorial content. A 10-minute time period will be allotted for completion of the quiz. The Mid-term test will take place in a regular 50-minute class and will consist of True/False, Multiple Choice or Matching types of questions along with short answer types of questions that may require a well-labeled diagram. Sample practice questions will be provided in lectures and tutorials in advance of quizzes, the mid-term test and the final exam. The final examination contains the same styles as the Mid-term test and includes a section of short essay questions. The final examination is a three-hour examination. Instructions for the final examination will be provided in lectures and posted in OWL.

6. Accommodation and Accessibility

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or supporting documentation to the Academic Counselling Office of your home faculty as soon as possible. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in NCB [second floor], and can be contacted at scibmsac@uwo.ca.

For further information, please consult the university’s medical illness policy at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf.

If the midterm test or final exam is missed and accommodation is approved, the make-up test or exam is then written.

Note that approval of accommodation for any course component worth 10% or more can only be made by the student’s Academic Counselling unit.

If you miss the Final Exam, please contact your faculty’s Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a “Multiple Exam Situation” (see http://www.registrar.uwo.ca/examinations/exam_schedule.html).

Date of Special Exam: TBA and set by the department.
Date for remake midterm test: within one week of the midterm test.
7. Academic Policies
The website for Registrarial Services is http://www.registrar.uwo.ca.

In accordance with policy, http://www.uwo.ca/its/identity/activatenonstudent.html, the centrally administered e-mail account provided to students will be considered the individual’s official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

No electronic devices are permitted for quizzes, tests and exams.
Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (https://www.turnitin.com/).

Computer-marked, multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

8. Support Services
Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 if you have questions regarding accommodation.

The policy on Accommodation for Students with Disabilities can be found here: www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_disabilities.pdf
The policy on Accommodation for Religious Holidays can be found here: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

Learning-skills counsellors at the Student Development Centre (http://www.sdc.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help.
Additional student-run support services are offered by the USC, http://westernusc.ca/services.
## Lecture Schedule

**Lectures:** Tuesday and Thursday 1:30 to 2:20pm  NS-7

<table>
<thead>
<tr>
<th>Assignment Due</th>
<th>Dates</th>
<th>Lecture</th>
<th>Course Overview and Course Outline: Why the Human Perspective?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why study Human Genetics?</td>
<td>R 6</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>What I want to learn about Human Genetics</td>
<td>T 11</td>
<td>Paper #1 Workshop</td>
<td>One Human: Multiple Genomes</td>
</tr>
<tr>
<td>My top two career choices</td>
<td>R 13</td>
<td>Paper #2</td>
<td>Mosaicism in Four Dimensions</td>
</tr>
<tr>
<td>Genetics in the News</td>
<td>T 18</td>
<td>Paper #2</td>
<td>Mosaicism in Human Disease</td>
</tr>
<tr>
<td>One URL: Where is the controversy?</td>
<td>R 20</td>
<td>Paper #3</td>
<td>How many genes are there in the Human Genome?</td>
</tr>
<tr>
<td>Name and describe the phenotype for an Orphan Disease</td>
<td>T 25</td>
<td>Paper #3</td>
<td>How many genes are there in the Human Genome?</td>
</tr>
</tbody>
</table>

### Additional Topics

<table>
<thead>
<tr>
<th>Important Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 7: classes end</td>
</tr>
<tr>
<td>December 8-9: study days</td>
</tr>
<tr>
<td>December 10-21: Exam period</td>
</tr>
</tbody>
</table>
**WEEKLY TUTORIAL SCHEDULE**

**TEACHING ASSISTANTS:**
- Rachel Kelly  
  rkelly66@uwo.ca
- Hallie Pavanel  
  hpavanel@uwo.ca

**Tentative Schedule pending Mid-term test date**

**Wednesdays 11:30 am to 12:20 pm  SEB 1200  All Tutorial Sections**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Where?</th>
<th>OWL Quiz Due</th>
<th>Tutorial Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>12</td>
<td>SEB 1200</td>
<td></td>
<td>Pedigree Puzzles: Construction and Interpretation</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>SEB 1200</td>
<td></td>
<td>Pedigree Puzzles: Case Studies in the Clinic</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>SEB 1200</td>
<td>Quiz 1</td>
<td>History of Human Genetics</td>
</tr>
<tr>
<td>October</td>
<td>3</td>
<td>SEB 1200</td>
<td>Quiz 2</td>
<td>Gene and Chromosome Anatomy and Nomenclature</td>
</tr>
<tr>
<td>Study week</td>
<td>10</td>
<td>no tutorial</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>SEB 1200</td>
<td>Quiz 3</td>
<td>Karyotypes and Robertsonian Translocations</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>SEB 1200</td>
<td>Quiz 4</td>
<td>Genetic Methods I &amp; II</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>SEB 1200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>7</td>
<td>SEB 1200</td>
<td>Quiz 5</td>
<td>Genetic Methods I &amp; II</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>SEB 1200</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>SEB 1200</td>
<td>Quiz 6</td>
<td>Bioethics unit: Human Genetic Dilemmas</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>SEB 1200</td>
<td></td>
<td>Bioethics unit: Human Genomic Dilemmas</td>
</tr>
<tr>
<td>December</td>
<td>5</td>
<td>SEB 1200</td>
<td>Quiz 7</td>
<td>Tutorial Focused Exam Review/Help Session</td>
</tr>
</tbody>
</table>

**December 7: classes end**

**December 8/9: study days**

**December 10-21: Exam period**

**Final Exam 40% December: TBA**
Procedure for Submitting Academic Appeals (Medical)

This guide is intended to help students in preparing an appeal or request for relief using grounds based on medical or compassionate circumstances, and extenuating circumstances beyond the appellant’s control.

Prior to preparing an academic appeal, students should begin by consulting Western University's official policy and procedures.

Deadlines

An appeal against a mark or grade must be initiated with the instructor as soon as possible after the mark is issued. In the event that the instructor is not available to the student, or fails to act, or if the matter is not resolved satisfactorily with the instructor, an appeal must be submitted to the Undergraduate Chair of the department within three weeks from the date that the mark was issued. In the case of a final grade in a course, the written appeal must be submitted to the Undergraduate Chair of the department by the following dates:

- January Marks: January 31st
- April/May Marks: June 30th
- Intersession: July 31st
- Summer Evening: August 31st
- Summer Day: September 15th
- Spring/Summer Distance Studies Courses: October 15th

To Whom should the Appeal be Sent

Requests for relief for undergraduate students ordinarily proceed in the order: course instructor, Undergraduate Chair of the department offering the course, Associate/Assistant Dean of Science or Basic Medical Sciences, and Senate Review Board Academic (SRBA).

A request for relief relating to a specific course (e.g., with respect to a mark, grade, appropriateness of assignments or examinations, or grading practices) must be initiated with the course instructor.

Requests for relief on other matters should be initiated in the office having immediate jurisdiction over the particular requirement or regulation in question. For example, a request for relief against a decision concerning program eligibility must be made to the Undergraduate Chair of the department offering the program.
Procedure

1. Grounds and Supporting Documentation
2. Consultation with Instructor
3. Written Appeal to Undergraduate Chair
4. Written Appeal to Associate/Assistant Dean
5. Appeals to Senate Review Board Academic (SRBA)

1. Grounds... In accordance with the policy on appeals, all grounds advanced in a request for relief must be supported by a clear and detailed explanation of the reasons for the request together with all supporting documentation.

1. How did the medical, compassionate or extenuating circumstances you encountered affect your academic performance?
   i. What actions did you take, if any, to address these issues?
   ii. Did the University (instructors, the Department or Faculty offering the course) play any parts on how these issues affected your academic performance?

The personal need of the appellant alone (to keep a scholarship, or to qualify an entrance requirement) does not constitute grounds for an appeal.

If you are unsure whether the grounds of your appeal are valid, you are advised to contact the Office of the Ombudsperson for advice.

All non-medical supporting documentation must be submitted together with the appeal. For appeals based on medical-related reasons, the appellant must decide whether to disclose the details of his/her medical conditions to the instructor(s) and/or Undergraduate Chair(s).

The voluntary submission of medical documentation to the instructor(s) and/or Undergraduate Chair(s) will allow them to take the information into their consideration of the appeal.

Alternatively, the appellant may choose to withhold the details of the medical documentation to the instructor (and/or Undergraduate Chair), and submit the medical documentation to the Faculty of Science Academic Counsellors (sciibmsac@uwo.ca), in accordance with the University’s Official Student Record Information Privacy Policy.

In this case, only the dates covered by the medical documentation will be released to the instructor and/or Undergraduate Chair. However, the instructor and/or Undergraduate Chair may decline the appeal due to the insufficient...
information provided. The appellant may then direct the appeal to the Associate/Assistant Dean, who has full access to Official Student Records including all medical documentation supplied to Faculty of Science.

2. Instructor…..The appellant’s discussion with an instructor could take place either in-person or in writing. In either format, appellant should present his/her reasons for the request for relief, and allow the instructor to respond.

If the appellant and the instructor could not come to an agreement, the appellant should briefly record the points raised by both sides in writing, and send the summary to the instructor for verification.

If the instructor agrees to grant the request, he/she will make the necessary changes on the appellant’s record. No further action is required.

3. Associate Chair….If the appellant is dissatisfied with the decision of the instructor, a written request for relief may be submitted to the Undergraduate Chair. The summary resulted from the consultation with the instructor should be used as the basis for the appeal. The appeal to the Undergraduate Chair should directly address why the instructor’s decision should be overturned. It should not contain any reasons that have not been presented to the instructor. The Undergraduate Chair will formally respond to the student in writing informing his/her decision.

If the Undergraduate Chair agrees to grant you the appeal, he/she will make the necessary changes on your record. No further reporting is required.

The contact information of Undergraduate/Department Chairs in Science and Basic Medical Sciences can be found here.

4. Associate Dean….An appeal against a decision of the Undergraduate Chair must be made to the Associate/Assistant Dean in writing not later than three weeks after the Undergraduate Chair’s decision is issued. All correspondence between the student, instructor and Undergraduate Chair, and any relevant information and documentation must be provided to the Associate/Assistant Dean.

The appeal to the Associate/Assistant Dean should directly address why the appellant believes the Undergraduate Chair’s decision should be overturned. It should not contain any new reasons that have not been presented to the instructor and Undergraduate Chair. The Associate/Assistant Dean will formally respond to the appellant in writing informing his/her decision.

Please send the appeal to the Associate/Assistant Dean according to the course that the appeal is directed to:
For 1000-level courses in Science (ACTURSCI, APPLMATH, ASTRONOM, BIOLOGY, CALCULUS, CHEM, COMPSCI, EARTHSCI, ENVIRSCI, INTEGSCI, MATH, PHYSICS, STATS)
Contact: Dr Denis Maxwell, Assistant Dean, First Year Studies
Email: dmaxwell@uwo.ca

For 2000-, 3000- and 4000-level courses in Science (ACTURSCI, APPLMATH, ASTRONOM, BIOLOGY, CALCULUS, CHEM, COMPSCI, EARTHSCI, ENVIRSCI, FINMOD, INTEGSCI, MATH, PHYSICS, STATS)
Contact: Dr J Hutter, Acting Associate Dean, Academic
Email: adasci@uwo.ca

For all courses in Basic Medical Sciences (ANATCELL, BIOCHEM, BIOSTATS, CHEMBIO, EPID, EPIDEMIO, MEDBIO, MEDSCIEN, NEURO, MICROIMM, MEDHINFO, PATHOL, PHARM, PHYSIOL, PHYSPHRM)
Contact: Dr Candace Gibson, Assistant Dean, Basic Medical Sciences Undergraduate Education
Email: candaceg@uwo.ca

5. SRBA....A student may appeal the decision of a Dean to the Senate Review Board Academic only if the decision falls within the jurisdiction of SRBA as set out below under APPEALS TO SRBA. A Dean's decision which is appealed to SRBA remains in full force and effect unless overturned or modified by SRBA. Please consult the university's official policy for more details.
Procedure for Submitting Academic Appeals (Non-Medical)

This guide is intended to help students in preparing and submitting an appeal that is directed to a specific course (e.g., with respect to a mark, grade, appropriateness of assignments or examinations, or grading practices), and the grounds of your appeal are not based on medical or personal reasons. Appeals on other matters, not a specific course (e.g., waiver of a Senate regulation or requirement, appropriateness of general grading practices of a department), should be initiated in the office having immediate jurisdiction for the particular requirement or regulation in question. Students in doubt as to the appropriate level at which to initiate such requests should consult Academic Counselling (scibmsac@uwo.ca) or the Associate Dean of Science (aadasci@uwo.ca).

Prior to preparing an academic appeal, students should begin by consulting Western University's official policy and procedures.

Deadlines

An appeal against a mark or grade must be initiated with the instructor as soon as possible after the mark is issued. In the event that the instructor is not available to the student, or fails to act, or if the matter is not resolved satisfactorily with the instructor, an appeal must be submitted to the Associate/Undergraduate Chair of the department within three weeks from the date that the mark was issued. In the case of a final grade in a course, the written appeal must be submitted to the Associate/Undergraduate Chair of the department by the following dates:

- January Marks: January 31st
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- Summer Evening: August 31st
- Summer Day: September 15th
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Appeals Process Stage

Appeals for undergraduate students related to a course normally proceed in the following order:

1. Instructor of the course in the Faculty of Science that the appeal is directed to (in-person consultation or written request)
2. Undergraduate Chair of the department offering the course (submission of written request)
3. Associate/Assistant Dean of Science or Basic Medical Sciences  
   (submission of written request)
4. Senate Review Board Academic (SRBA)

**Procedure**

1. **Layout the Reasons for your Appeal**

   Prior to contacting the instructor for an appeal, you are strongly encouraged to layout your arguments or grounds in writing, and, if applicable, have all of the supporting documentation available.

   Grounds for appeals on a specific course may include things such as bias, inaccuracy or unfairness. In your arguments, clearly indicate the detailed reasons in a concise manner; for example:
   
   - in a multiple-choice exam, provide the justifications of why your incorrect choice of a question should be also accepted as the correct answer;
   - if you find an exam question ambiguous, clearly state your interpretation and how it led to your answer deemed incorrect;
   - if you find the grading practice to be unfair or bias, explain how it affects your grade and the grades of other students in the same class.

   Ignorance of Senate regulations and policies and particular program requirements and policies as set out in the University Calendar does not constitute grounds for an appeal.

   The personal need of the appellant alone (to keep a scholarship, or to qualify an entrance requirement) does not constitute grounds for an appeal.

   If you are unsure whether the grounds of your appeal are valid, you are advised to contact the **Office of the Ombudsperson** for advice.

2. **Consultation with Instructor**

   The appellant’s discussion with an instructor could take place either in-person or in writing. In either format, appellant should present his/her reasons for the request for relief, and allow the instructor to respond.

   If the appellant and the instructor could not come to an agreement, the appellant should briefly record the points raised by both sides in writing, and send the summary to the instructor for verification.

   If the instructor agrees to grant the request, he/she will make the necessary changes on the appellant’s record. No further action is required.

3. **Written Appeal to Undergraduate Chair**
If the appellant is dissatisfied with the decision of the instructor, a written request for relief may be submitted to the Undergraduate Chair. The summary resulted from the consultation with the instructor should be used as the basis for the appeal. The appeal to the Undergraduate Chair should directly address why the instructor’s decision should be overturned. It should not contain any reasons that have not been presented to the instructor. The Undergraduate Chair will formally respond to the student in writing informing his/her decision.

If the Undergraduate Chair agrees to grant you the appeal, he/she will make the necessary changes on your record. No further reporting is required.

The contact information of Undergraduate/Department Chairs in Science and Basic Medical Sciences can be found here.

4. Written Appeal to Associate/Assistant Dean
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  Contact: Dr Denis Maxwell, Assistant Dean, First Year Studies
  Email: dmaxwell@uwo.ca
- For 2000-, 3000- and 4000-level courses in Science (ACTURSCI, APPLMATH, ASTRONOM, BIOLOGY, CALCULUS, CHEM, COMPSCI, EARTHSCI, ENVIRSCI, FINMOD, INTEGSCI, MATH, PHYSICS, STATS)
  Contact: Dr Ken Yeung, Acting Associate Dean, Academic
  Email: aadasci@uwo.ca
- For all courses in Basic Medical Sciences (ANATCELL, BIOCHEM, BIOSTATS, CHEMBIO, EPID, EPIDEMIO,
5. Appeals to Senate Review Board Academic (SRBA)
A student may appeal the decision of a Dean to the Senate Review Board Academic only if the decision falls within the jurisdiction of SRBA as set out below under APPEALS TO SRBA. A Dean's decision which is appealed to SRBA remains in full force and effect unless overturned or modified by SRBA. Please consult the university's official policy for more details.