

**YORK UNIVERSITY
DIVISION OF NATURAL SCIENCE**

SC/NATS 1675 6.0 A – HUMAN DEVELOPMENT

Summer 2017

This course examines human development from several biological perspectives. Topics will include a review of the biological and molecular requirements of life, a survey of the human body's design, and the role of cells in forming and maintaining the body. Other topics will centre on the study of how the human body forms, from fertilization through to the formation of the fully functioning body. These topics will include ovulation, the stages of embryonic and fetal development, the placenta and fetal circulation, hormonal regulation of the male and female reproductive systems, and the role of DNA during growth and development, genetics, and inheritance of physical characteristics.

Course Director:

Dr. B. Barbara Czaban
CB 342, 416-736-2100 Ext: 22321,
E-mail: nat1675a@yorku.ca
Office hours: E-mail to set an appointment

Lectures: Tuesdays and Thursdays 10:00 am – 1:00 pm SLH-D

Course Website: <http://moodle.yorku.ca>. Log in with your passport York account.

Other Websites: 1. The Division of Natural Science website: <http://natsci.info.yorku.ca/>
 2. Learning Skills Services: <http://www.yorku.ca/cds/lss/index.html>

Textbook:

An Introduction to the Biology of Human Development, Custom Textbook. Published by Nelson Education Ltd. Available in the York bookstore. Additional readings may be assigned.

Credit Exclusions:

SC/NATS 1610 6.00, SC/NATS 1650 6.00, SC/NATS 1660 6.00, SC/NATS 1690 6.00.

NCR Note:

This course is not open to any student who has passed SC/BIOL 1010 6.00 or to students who have passed or are taking SC/BIOL 1000 3.00 or SC/BIOL 1001 3.00.

Mathematical Content:

Minimal simple arithmetical calculation at about the Grade 10 level.

Evaluation:

The final grade for this course is based strictly on the work done and the actual grades obtained for that work. Additional work or extra assignments to increase the final grade will not be provided.

- Assignment(s) 20%
- 4 Term Tests @ 20% each - Dates will be available during 1st week of classes

Important Dates:

The last date to ADD a course without permission of course instructor is **May 15, 2017**.

The last date to ADD a course with permission of course instructor is **May 29, 2017**.

The last day to DROP a course without receiving a grade is **July 7, 2017**

LECTURE TOPICS:

This is a list of the general topics that will be covered in this course. New topics may be added. The order of topics may change. Not all topics may be covered.

1. The Biological Requirements of Life
 - Raw materials, energy, oxygen, water, temperature, and pressure
2. Body Design
 - Body organization; eating, breathing, circulation, and more
 - Biological molecules – the building blocks of the body
3. Cells Build Bodies
 - Smallest units of life
 - From cells to tissues, to organs, to body
 - Homeostasis: Healthy Cells, Healthy Bodies
4. The Development of the Human Body
 - Ovulation, zygote, pre-embryo, embryo, fetus
 - Placenta and fetal circulation; nutrients and oxygen
 - Male and female reproductive systems – structures and hormones
5. The Growth of the Human Body
 - From single-celled zygote to multi-celled body – cell reproduction and mitosis
 - Gametogenesis – sperm and egg cell formation by meiosis
 - Sexual reproduction; the human life cycle
6. DNA and its role in development, genetics and inheritance of physical characteristics
 - Genes and gene expression – making the molecules that build your body
 - Regulation of gene expression during development – why your body looks the way it does
 - Transmission of genetic information from parents to their children

EXAMS:

Exam Format & Content

Exams will consist mainly of multiple choice questions, but also may include true/false, fill-in, matching, and short answer questions. Exams will be based on the material and discussions presented in class, the lecture notes, the related text book readings, and other readings and materials that may be provided. Students are not responsible for sections in the text book that are not covered in the lecture notes or discussed during lectures – unless otherwise specified.

Exam content will be cumulative, with each new exam covering approximately 80-90% of the new material covered since the previous exam and the rest being from the content covered in previous exams.

Missing an Exam

The exams are an important evaluation component of this course.

If you miss an exam, you must notify the course director by e-mail within 24 hours of the missed exam. You then will be provided with information about when and where to submit documentation that supports your reason for missing the exam. Documentation is due within one week after the missed exam or a

deadline date set by the course director. Failure to fulfill either of these requirements within the set deadlines **may result** in an automatic denial of the request for an accommodation.

In the case that an exam was missed due to a medical reason, you must submit the original, signed, dated, and stamped York Attending Physician's Statement. Photocopies or electronic copies will **not** be accepted.

The York Attending Physician's Statement must be the **most current version** that is available from the Registrar's Office. The version date is indicated in the left side of the document's footnote. Older versions of the York Attending Physician's Statement will **not** be accepted. If you're not sure which is the most current version, please contact the course director at nat1675a@yorku.ca .

Documentation must be dated within 48 hours of the exam date. Other doctor notes - or histories of illness - will **not** be accepted. After reviewing the documentation, the course director will decide whether or not to grant your request for an accommodation.

In the case that an exam was missed due to a non-medical reason, you must contact the course director via e-mail within 24 hours of the exam. You then will receive further instructions and, if necessary, you will be asked to submit documentation to support your reason for missing the exam. The course director will then decide whether or not to grant your request for an accommodation.

Submitting falsified or altered documentation in support of a missed exam is a violation of Academic Integrity which will lead to disciplinary actions under York University's Senate Policy on Academic Honesty. **For details, see section 2.1.8** of York University's Senate Policy on Academic Honesty relating to the falsification of medical documentation at the following link: <http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>

Being on vacation, other course conflicts, or work conflicts are NOT valid reasons that qualify for accommodation.

Accommodations are NOT automatic. Only ONE request for an accommodation will be granted. In the case of an exceptional circumstance, contact the Course Director.

If a request for an accommodation is granted, the following accommodations will be applied:

- ***Missing Exam 1, 2, or 3:*** The weight of the missed exam will be spread across the 3 written exams. No opportunities to make up any of these missed exams will be offered.
- ***Missing Exam 4:*** A make up exam will be provided. If you miss the make up exam you will need to petition to write the exam.

IMPORTANT INFORMATION:

Students who feel that there are extenuating circumstances which may interfere with the successful completion of their exams or other course requirements are encouraged to discuss the matter with the Course Director as soon as possible.

Students with physical, learning or psychiatric disabilities who require reasonable accommodations in teaching style or evaluation methods should discuss this with the Course Director early in the term so that appropriate arrangements can be made.

STUDENT CONDUCT:

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and refrain from actions disruptive to such a relationship and to the class. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom,

and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. A statement of the policy and procedures involving disruptive and/or harassing behaviour by students in academic situations is available on the York website: <http://www.yorku.ca/secretariat/policies/document.php?document=82>

A major concern in large classes is students talking to other students during lectures. "Chatting" during lectures is disruptive and damaging to fellow students and the instructor and will not be tolerated. Students are expected to respect others by not speaking unless invited to by the instructor, and by turning cell phones off before lecture begins.

CHEATING & PLAGIARISM:

Cheating and plagiarism are major academic offences and carry serious penalties ranging from a failing grade on the work in question to expulsion from the University. For details, see York University's Senate Policy on Academic Honesty at the following link: <http://www.yorku.ca/secretariat/policies/document.php?document=69>

Familiarize yourself about Academic Integrity at by checking the information and links at (you may have to cut and paste the link to your browser):
<https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/>

Effective time management and study skills can help students avoid feeling desperate and engaging in actions which violate academic integrity. For more information, check the ***Time Management module*** in the above link.

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SENDING E-MAIL MESSAGES:

1. ***Send all e-mail messages only to the course e-mail address*** – nat1675a@yorku.ca
2. ***Send messages only from your yorku.ca e-mail address*** because York University often blocks messages from other e-mail providers and your message will not be acknowledged.
3. ***Always fully identify yourself*** by including your full name **and** student number in all course related e-mail messages.
4. Use proper grammar when writing your messages.
5. E-mail messages must **never** include attachments.
6. All e-mail messages will be read and normally answered within 48 hours, however this may not always be possible – and your understanding and patience is appreciated. If you don't get a reply within 48 hours, please re-send your message.