

STUDENT COURSE INFORMATION

FANSHAWE COLLEGE OF APPLIED ARTS AND TECHNOLOGY
HEALTH SCIENCES

JANUARY 2010

BIOL-1008 -- BIOLOGICAL SCIENCES II

Duration: 45 total course hours

Credit Units: 3.00

*NOTE: The hours may vary.

This course is a prerequisite for:
NO COURSES

Prerequisite(s) for this course:

ANAT-1002	HUMAN ANATOMY I
BIOL-1003	BIOLOGICAL SCIENCES I
CHEM-1004	CHEMISTRY I
HLTH-1032	SUCCESS STRATEGIES IN HLTH PR
MATH-1024	MATHEMATICS
PHYS-1005	PHYSICAL SCIENCES I

Co-requisite(s) for this course:

NO COURSES

Course Description:

BIOL 1008 continues the study of life sciences by examining nucleic acids, protein synthesis, molecular genetics, recombinant DNA, and genetic engineering technology. In this course, students will also learn about human defense mechanisms, immune system disorders, circulation and homeostasis, with a special focus on prevalent diseases, such as coronary artery diseases, and autoimmune diseases.

Vocational Learning Outcomes:

Upon successful completion of this course, the student will be able to:

1. Describe and compare deoxyribonucleic acid and the five types of ribonucleic acid.
2. Outline the processes of replication, transcription, and translation.
3. Outline the processes of and uses of DNA technology.
4. Have an understanding of the circulatory system and coronary artery disease.
5. Have an understanding of homeostasis in mammals.
6. Explain specific and nonspecific defense mechanisms in the human body.

Essential Employability Skills Learning Outcomes:

Essential Employability Skills Learning Outcomes		Taught	Reinforced	Assessed or evaluated
1.	Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	Respond to written, spoken or visual messages in a manner that ensures effective communication.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	Execute mathematical operations accurately.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	Apply a systematic approach to solving problems.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Use a variety of thinking skills to anticipate and solve problems.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.	Locate, select, organize and document information using appropriate technology and information systems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	Analyze, evaluate and apply relevant information from a variety of sources.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.	Show respect for the diverse opinions, values, belief systems and contributions of others.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9.	Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10.	Manage the use of time and other resources to complete projects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11.	Take responsibility for one's own actions, decisions and consequences.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Detailed Content:

UNIT 1 - DNA, the genetic material

- Discovering DNA
- DNA replication
- DNA mutations

UNIT 2 - How genes work

- Transcription
- Translation
- Regulation of gene expression

UNIT 3 - Gene Technology

- Genetic engineering
- Advances in medicine
- Genetic engineering in agriculture

UNIT 4 - Circulation

- The circulatory system in vertebrates
- Vertebrate circulation
- Coronary artery disease

UNIT 5 - Homeostasis

- Osmoregulation
- Kidney function in vertebrates

UNIT 6 - The endocrine system

- Hormones
- Major endocrine glands

UNIT 7 - Three lines of defense

- The skin
- Specific immunity

UNIT 8 - The immune response

- T cells
- B cells
- Vaccination

UNIT 9 - Defeat of the immune system

- Autoimmune diseases
- Allergies

Teaching/Learning Methodology:

Textbook reading assignments
Electronic Resources
Independent study

Required Learning Resources:

The Living World, 6h Edition, 2008. George B. Johnson. McGraw-Hill

Method Of Evaluation:

The final mark/grade for this course will be determined as follows:

Method	Percentage
In-class Assignments	20%
Midterm Exam	40%
Final Exam	40%
TOTAL	100%

Missed Evaluations

Students are required to complete all evaluations at/by the scheduled date and time. A mark of zero is recorded for all missed evaluations.

Students cannot make the assumption that any provision will be made by the professor to reschedule missed evaluations. If illness or serious extenuating circumstances prevent attendance, the student must notify the course professor or one of the divisional secretaries at the College, prior to the scheduled/due date and time of the evaluation in question; otherwise, a mark of zero will be automatically assigned.

Rescheduling of a missed evaluation may be granted in exceptional circumstances as specified by College Evaluation Policy 2-C-02 and after consultation with your professor, and it must be completed within one (1) week of the original test date. A fee established by the Office of the Registrar's is charged for all such rescheduled evaluations regardless of the circumstances. The format of any rescheduled evaluation is at the course professor's discretion and may not follow the original test format.

Examples of invalid excuses which may result in the assignment of zero (0) for missed evaluations include planned or unplanned vacations, transportation problems, job demands, friends' problems, sick family members, and/or lack of preparedness. Faculty reserve the right to request a note from the appropriate professional for a missed evaluation before a rewrite may be granted.

Upgrades

This course is upgradeable under college policy 2-C-04. See program intersession course information posted on FOL.

Educational Technology

this course requires regular computer use. Course information will be available on-line using FOL or similar Web-based programs. There will be no additional costs to the students for the use of FOL or similar programs.

Electronic Communication

This course requires access to FOL email. All students registered in this course must have active FOL accounts. Fanshawe College provides access www.FanshawOnline.ca (the student web site portal) and to personal computers at many sites within the College. If you have any concerns about meeting this requirement, contact your professor or the Connect Resource Centre in E2030.

NOTE: Test and assignment due dates, etc. will be provided by the professor at the beginning of the course.

Consult the Program Division Policy for additional information on course evaluation and progression.

<u>Grade</u>	<u>Range</u>	<u>Comment</u>	<u>Grade Point</u>
A+	90-100	Distinguished	4.2
A	80-89		4.0
B+	75-79		3.5
B	70-74		3.0
C+	65-69		2.5
C	60-64		2.0
D+	55-59		1.5
D	50-54	Marginal	1.0
F	0-49	Unsatisfactory	0
P	greater than 50	Pass	N/A
I	N/A	Incomplete	N/A
N	N/A	No Credit Achieved	N/A
W	N/A	Withdrawn	N/A
X	N/A	Audit	N/A

CHEATING - All forms of cheating are considered an academic offence and the College has a clear policy on cheating. Please refer to Policy 2-G-04 on Fanshawe Online or in the Student Handbook.

PLAGIARISM - Plagiarism is cheating and an appropriate penalty will be applied and a report will be placed in the student's file in conformance with College Policy 2-G-04 on cheating. Plagiarism (the intellectual dishonesty resulting from a student's failure to acknowledge indebtedness to sources used) is a serious academic offence that shall result in appropriate penalties, to be determined at the discretion of the course professor in consultation with the Divisional Chair. Plagiarism includes, but is not limited to, submitting the same work to more than one professor for credit in different courses without prior written permission from the professors. Penalties shall range from failure of an assignment to possible failure of the course.

REWRITES - Students cannot make the assumption that any provision will be made by the professor to permit a student to rewrite failed assignments or tests.

Turnitin.com

As part of Fanshawe College's commitment to fostering excellence in student assignments, this course may require students to submit their papers to Turnitin.com. This Web service is designed to help students understand the importance of identifying borrowed work in their essays, and how to correctly cite research sources. Instructions for how to use Turnitin.com will be provided by the professor, and additional information is available at www.Turnitin.com.

Prepared By:

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The following applies for course offerings consistent with the Standard Academic Calendar:

Internal/External Course Credit Application Deadline

Applications for Internal/External Course Credit are available from the Office of the Registrar. Check college calendar for deadlines.

Course Add/Drop Deadline

You may withdraw from a course without academic penalty during the first 70% of the course duration. Application is made through the Office of the Registrar.

Academic Assistance

The primary resource for students experiencing difficulty with course material is the course professor. In addition, students who wish to attend study skills workshops or who require further assistance, can contact the Learning Centre in A2019 (519 452 4265) for one-to-one tutoring from staff in math, physics, chemistry and english, or they can contact Counselling and Student Life in F2010 (519 452 4282) for information about receiving peer tutoring.

Student Success Advisors are available to assist students with academic concerns or other problems they may face while at Fanshawe. They can either assist you directly, or refer you to the appropriate resource on campus to get the help you need. Contact information for your Student Success Advisor can be found on the Web at <http://www.fanshawec.ca/EN/ssa/14317/advisors.asp>.

Students who have been identified as having (or who wish to be assessed for) a specific learning disability, should contact Disability Services F2010 (519 452 4282) in Counselling and Student Life for information about available support services.

Re-taking a Course:

Subject to meeting any pre-requisite or co-requisite requirements, a student may retake a course. The second re-take must be approved by the Academic Manager or designate and will be granted based on extenuating circumstances and with recommended interventions such as counselling or a learning contract. Subsequent re-take opportunities will only be available as part of an overall success strategy developed in consultation with the student, program co-ordinator and the Academic Manager. The best grade achieved will be used in calculating the cumulative GPA.

Related Policies

Course Grade System - [See College Policy 2-C-04](#)

Prior Learning Assessment and Recognition - [See College Policy 2-A-10](#)

Evaluations - [See College Policy 2-C-02](#)

Academic Standing - [See College Policy 2-C-05](#)

Student Appeal of a Grade or Other Academic Decision - [See College Policy 2-G-02](#)

Academic Withdrawal and Termination - [See College Policy 2-C-06](#)

Academic Offences - [See College Policy 2-G-04](#)

Student Code of Conduct Policy - [See College Policy 2-G-01](#)

Respectful College Community Policy - [See College Policy 1-B-46](#)

Authorized By:



Date:

JANUARY 2010