

Science and Society

NASC-210

CG Section 8WK 11/08/2019 to 04/16/2020 Modified 07/27/2021

Course Description

A study of biological principles of physiology, genetics and disease with emphasis on application to human life. Topics are explored from a scientific and biological standpoint through a Biblical worldview. Successful students in this course will apply scientific knowledge and learned critical thinking skills to societal issues. Meets natural science requirement.

Requisites

For information regarding prerequisites for this course, please refer to the [Academic Course Catalog \(https://catalog.liberty.edu/\)](https://catalog.liberty.edu/).

Rationale

NASC 210 is an approved general education science course for non-technical (science, math, and engineering) majors. This course will provide the basic scientific knowledge needed to discuss biomedical topics and scientific advances. It will arm the student with the specific language of science relating to current policy issues such as genetic engineering, reproduction, and IVF embryos.

Course Learning Outcomes

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

- A. Explain the basic structure of genes, gene expression, and inheritance.
- B. Describe cellular reproduction and differentiation.
- C. Differentiate between normal cell and cancer cell characteristics.
- D. Analyze genetic technologies and their implication for society.
- E. Determine the importance of a biblical worldview in providing a foundation for response to ethical dilemmas raised by scientific advances.
- F. Review human development and lifespan in the context of current biotechnologies.

General Education Foundational Skill Learning Outcomes

Social and Scientific Inquiry: the ability to employ established methods of exploring the social and natural sciences in order to understand the human experience of various social structures and the natural world.

SSI 1: Demonstrate an understanding of the impact of social and/or natural sciences on the world in which we live.

SSI 3: Apply solutions for a social and/or scientific dilemma experienced in society.

SSI 4: Describe how social and/or scientific inquiry equips human beings to be participants in God's redemptive work.

Course Resources

Click on the following link to view the required resource(s) for the term in which you are registered: [Liberty University Online Bookstore \(https://bncvirtual.com/liberty/\)](https://bncvirtual.com/liberty/).

Additional Materials for Learning

- A. Computer with basic audio/video output equipment
- B. Internet access (broadband recommended)
- C. Blackboard [recommended browsers \(https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support\)](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support)
- D. Microsoft Office
- E. Turabian Writing Guide: <https://www.liberty.edu/academics/casas/academicsuccess/index.cfm?PID=11954>
(<https://www.liberty.edu/academics/casas/academicsuccess/index.cfm?PID=11954>)

☰ Course Assignments

Textbook readings and lecture presentations

Course Requirements Checklist

After reading the Course Syllabus and Student Expectations, the student will complete the related checklist found in Module/Week 1.

Discussion Board Forums (3)

Discussion boards are collaborative learning experiences. Therefore, the student is required to create a thread in response to the provided prompt for each forum after reading the assigned case study. Each thread must be at least 300 words, include 1 citation from the Bible and 1 citation other than the course text, and demonstrate course-related knowledge. Sources must be cited in current Turabian format. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be at least 150 words.

Chromosome Lab Activities (2)

The student will perform a hands-on activity, answer a series of fill-in-the-blank questions, and write 2 essays (1 essay in each of 2 modules/weeks) in response to the essay questions. Each essay must be 100–140 words and demonstrate course-related knowledge related to a specific case study reading in the course textbook. The essay must include 1 citation from the Bible and an outside source, and it must include photographs when assigned within the activity. Sources must be cited in current Turabian format.

Karyotyping and Genetics Testing

The student will complete an online activity, answer a series of fill-in-the-blank questions, and write 1 essay in response to an essay question. The essay question answer must be 100–140 words and demonstrate course-related knowledge. The essay must include 1 citation from the Bible and 1 from an outside source other than the course textbook. Sources must be cited in current Turabian format.

Exams (8)

Each exam will cover the Reading & Study material for the module/week in which it is assigned. Each exam will be open-book/open-notes, contain 25 multiple-choice and true/false questions, and have a 30-minute time limit.

✓ Course Grading

Course Requirements Checklist	10
Discussion Board Forums (3 at 80 pts ea)	240
Chromosome Lab Activity (2 at 50 pts ea)	100
Karyotyping and Genetics Testing	60

Exams (8 at 75 pts ea)	600
Total	1010

Policies

Late Assignment Policy

Course Assignments, including discussions, exams, and other graded assignments, should be submitted on time.

If the student is unable to complete an assignment on time, then he or she must contact the instructor immediately by email.

Assignments that are submitted after the due date without prior approval from the instructor will receive the following deductions:

1. Late assignments submitted within one week after the due date will receive up to a 10% deduction.
2. Assignments submitted more than one week and less than 2 weeks late will receive up to a 20% deduction.
3. Assignments submitted two weeks late or after the final date of the course will not be accepted outside of special circumstances (e.g. death in the family, significant personal health issues), which will be reviewed on a case-by-case basis by the instructor.
4. Group projects, including group discussion threads and/or replies, and assignments will not be accepted after the due date outside of special circumstances (e.g. death in the family, significant personal health issues), which will be reviewed on a case-by-case basis by the instructor.

Disability Assistance

Students with a disability and those with medical conditions associated with pregnancy may contact Liberty University's Online Office of Disability Accommodation Support (ODAS) at LUOODAS@liberty.edu for accommodations. Such accommodations require appropriate documentation of your condition. For more information about ODAS and the accommodations process, including how to request an accommodation, please visit <https://www.liberty.edu/online/online-disability-accommodation-support/> (<https://www.liberty.edu/online/online-disability-accommodation-support/>). Requests for accommodations not related to disabilities or pregnancy must be directed to the Registrar's Office, which generally handles medical needs support.

If you have a complaint related to disability discrimination or an accommodation that was not provided, you may contact ODAS or the Office of Equity and Compliance by phone at (434) 592-4999 or by email at equityandcompliance@liberty.edu. Click to see a full copy of Liberty's [Discrimination, Harassment, and Sexual Misconduct Policy](https://www.liberty.edu/media/1226/Liberty_University_Discrimination_Harassment_and_Sexual_Misconduct_Policy.pdf) (https://www.liberty.edu/media/1226/Liberty_University_Discrimination_Harassment_and_Sexual_Misconduct_Policy.pdf) or the [Student Disability Grievance Policy and Procedures](http://www.liberty.edu/media/8021/Disability_Grievance_Procedures.pdf) (http://www.liberty.edu/media/8021/Disability_Grievance_Procedures.pdf).

Course Attendance

In an effort to comply with U.S. Department of Education policies, attendance is measured by physical class attendance or any submission of a required assignment within the enrollment dates of the course (such as examinations, written papers or projects, any discussion posts, etc.) or initiating any communication with one's professor regarding an academic subject. More information regarding the [attendance policy](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FOnline%2BAttendance%2BAnd%2BNon-Attendance&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613719138&sdata=%2BNBTsPOoXuHAPLflSQRugK7cRSuV6UyC7qD3agf3l2k%3D&reserved=0) (<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FOnline%2BAttendance%2BAnd%2BNon-Attendance&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613719138&sdata=%2BNBTsPOoXuHAPLflSQRugK7cRSuV6UyC7qD3agf3l2k%3D&reserved=0>) can be found in the [Academic Course Catalogs](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.liberty.edu%2Findex.cfm%3FPID%3D791&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=DjjhMiRBFnF%2B2ZJUC8eBd1OdNb26S9ADukODYsilXIA%3D&reserved=0) (<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.liberty.edu%2Findex.cfm%3FPID%3D791&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=DjjhMiRBFnF%2B2ZJUC8eBd1OdNb26S9ADukODYsilXIA%3D&reserved=0>). Regular attendance in online courses is expected throughout the length of the term. Students who do not attend within the first week of a sub-term by submitting a required academic assignment (such as the Course Requirements Checklist, an examination, written paper or project, discussion post, or other academic activity) will be dropped from the course. Students who wish to re-engage in the course are encouraged to contact Academic Advising to discuss their enrollment options. Students who begin an online course, but at some point in the semester cease

attending, and do not provide official notification to withdraw, will be assigned a grade of "FN" (<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FUnofficial%2BWithdrawals&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=MoMvZdPfa69InuhVHMHAVgu59ZP0Fw45xJTU9PIBrU%3D&reserved=0>). Students wishing to withdraw from courses after the official start date should familiarize themselves with the [withdrawal policy](#).

Grading Scale

A	B	C	D	F
900-1010	800-899	700-799	600-699	0-599

For courses with a Pass/NP final grade, please refer to the Course Grading section of this syllabus for the assignment requirements and/or point value required to earn a Passing final grade.

Add/Drop Policy

The full policy statement and procedures are published in the [Policy Directory](https://wiki.os.liberty.edu/display/IE/Dropping+and+Adding+Online+Classes) (<https://wiki.os.liberty.edu/display/IE/Dropping+and+Adding+Online+Classes>).

Honor Code

Liberty University comprises a network of students, Alumni, faculty, staff and supporters that together form a Christian community based upon the truth of the Bible. This truth defines our foundational principles, from our Doctrinal Statement to the Code of Honor. These principles irrevocably align Liberty University's operational procedures with the long tradition of university culture, which remains distinctively Christian, designed to preserve and advance truth. Our desire is to create a safe, comfortable environment within our community of learning, and we extend our academic and spiritual resources to all of our students with the goal of fostering academic maturity, spiritual growth and character development.

Communities are predicated on shared values and goals. The Code of Honor, an expression of the values from which our Doctrinal Statement was born, defines the fundamental principles by which our community exists. At the core of this code lie two essential concepts: a belief in the significance of all individuals, and a reliance on the existence of objective truth.

While we acknowledge that some may disagree with various elements of the Code of Honor, we maintain the expectation that our students will commit to respect and uphold the Code while enrolled at Liberty University.

Adherence to the principles and concepts established within facilitates the success of our students and strengthens the Liberty community.

The Code of Honor can be viewed in its entirety at <http://www.liberty.edu/index.cfm?PID=19155> (<http://www.liberty.edu/index.cfm?PID=19155>).

Schedule

NASC 210

Textbook: Lewis, R., *Human Genetics* (2018).

Module/Week	Reading & Study	Assignments	Points
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1	Lewis: chs. 1-2	Course Requirements Checklist	10
	4 presentations	Class Introductions	0
		Chromosome Lab Activity 1	50
		Exam 1	75
2	Lewis: chs. 3, 9-10, 13 3 presentations	Chromosome Lab Activity 2	50
		Exam 2	75
3	Lewis: chs. 4-5 2 presentations	DB Forum 1	80
		Exam 3	75
4	Lewis: chs. 6-7 2 presentations	Exam 4	75
5	Lewis: ch. 8	DB Forum 2	80
		Exam 5	75
6	Lewis: chs 12, 18 1 presentation	DB Forum 3	80
		Exam 6	75
7	Lewis: chs. 16, 19-20 2 presentations 1 website	Karyotyping and Genetics Testing	60
		Exam 7	75
8	Lewis: chs. 21-22 1 presentation	Exam 8	75
Total			1010

DB = Discussion Board

NOTE: Each course module/week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on Friday.