
Calumet College



of Saint Joseph

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Calumet College of St. Joseph is a Catholic institution of higher learning dedicated to the academic, spiritual and ethical development of undergraduate and graduate students. Informed by the values of its founding religious community, the Missionaries of the Precious Blood (C.P.P.S.), the College promotes the inherent dignity of all people, social justice, an ethic of service, student empowerment, opportunity, and lifelong learning.

We are committed to the Five Pillars of a CCSJ Education: The CCSJ graduate will be Open to Growth, Intellectually Competent, Religious, Loving, and Committed to Doing Justice. This class, as outlined below, will help you to achieve those goals.

COURSE SYLLABUS, Fall 2020

Course: BIOL 115A Cell and Evolution-Lecture

Instructor Information:

Instructor Name	Dr. Edward Draper
Office Number:	514
Phone Number:	219-473-4268
Email:	edraper@ccsj.edu
Office Hours:	Monday 1:00 – 1:30, Wednesday 1:35 – 2:35, and Thursday 1:35 – 2:35. I will be available in my office or via my office phone, listed above, during these times.
Instructor Background: B.S. in Biology from Loyola University Chicago. M.S. in Biology from Purdue University. PhD. In Biology from the University of Illinois Chicago. My research focuses on using the yeast, <i>Saccharomyces cerevisiae</i> , as a model system to study cellular biology.	

Course Information:

Course Delivery Method:	Hybrid (online with scheduled in-person meetings). Students whose last names end in A-M will attend class in person on Tuesdays, and live via zoom during class time on Thursdays. Students whose last names end in N-Z will attend class in person on Thursdays, and live via zoom during class time on Tuesdays.
Course Time:	Tuesday and Thursday 8:30 – 10:00
Classroom:	200
Prerequisites:	MATH 103 or higher and concurrent enrollment in BIOL 115 Lab
Required Books and Materials:	Campbell Biology by Urry, et al. 11 th edition. ISBN: 978-0-134-09341-3 Make it Stick: The Science of Successful Learning by Brown, et al. ISBN: 978-0-674-72901-8

Learning Outcomes/ Competencies:

Students in this course will:

- Identify the overall structures and cellular functions of the four classes of macromolecules: lipids, carbohydrates, proteins, and nucleic acids
- Describe structure-function relationships found in cellular structures and processes
- Compare and contrast prokaryotes and eukaryotes in terms of cellular structures, organization, and life processes
- Describe cellular processes used to create energy
- Demonstrate the flow of information in cells
- Describe biological fundamentals of current issues in biotechnology (such as cloning, DNA fingerprinting, gene therapy, and stem cell research)

This course meets the following learning objectives for the Biomedical Science program:

- **Scientific Knowledge and Critical Thinking:**
 - Students will demonstrate substantial and up to date core knowledge of broad areas in basic biomedical, translational, or clinical research.
 - Students will demonstrate the ability to accurately and critically evaluate their own scientific work and work of others.
- **Research Skills and Problem-Solving Ability:**
 - Students will demonstrate advanced understanding of a range of technical and conceptual approaches used in biomedical research.
 - Students can design, carry out, and interpret research projects that generate new knowledge that advances the biomedical science and human health.
- **Specific Expertise:**
 - Students can articulate the significance of their own work to their chosen research area in both historical and forward-looking contexts.
 - Students will demonstrate mastery of a range of technical and conceptual approaches used in their selected research area.
- **Communication:**
 - Students will demonstrate the oral, written and media communication skills required to be effective communicants, teachers and mentors of peers, future scientist and scientifically literate citizens.
- **Ethics and Advocacy:**
 - Students will apply highest standards of ethics to their research (data managements, research subjects, stewardship of research funds)
 - Students will improve their confidence and interactions with colleagues and the public.
 - Students will be able to advocate for the role of science in medicine and society.
- **Career Preparation:**
 - Students can articulate an appropriate set of desire potential career paths, and are aware of the preparation and initiative required to pursue these paths

The course also meets the following General Education Program objectives:

- Students will read analytically, synthetically, and critically in a variety of genres.
- Students will write in a variety of forms using valid logic, persuasive rhetoric, and correct grammar, usage, and punctuation.
- Students will represent, apply, analyze, and evaluate relevant qualitative and quantitative mathematical and scientific evidence (i.e. equations, graphs, diagrams, tables, words) to support or refute an argument.
- Students will be able to apply ethical standards to social issues and analyze their own core beliefs and the origin of these beliefs.

This course meets Calumet College of St. Joseph's Signature Assignment requirement to demonstrate fundamental competency in written and/or oral communications.
Course Description: A 3-credit hour class. Introduction to biological concepts, including origins of life, biochemical principles, energetics, cellular organization, mechanisms of heredity, and evolution. Students will explore unifying concepts in biological science while developing key investigative skills necessary for scientific exploration and hypothesis testing. Includes laboratory.
Learning Strategies: Active learning, BlackBoard, group discussions, team projects, collaborative learning, laboratory exercises, demonstrations.
Experiential Learning Opportunities: Laboratory experience is essential for a fundamental understanding of the scientific method. This course has a required laboratory portion that provides students with experiential learning through experimental design, hypothesis development, data interpretation, and communication of results through laboratory reports.

Assessments:		
Exams	There will be 4 regular exams during the semester. Approximately 80% of each exam, except exam 1, will test your knowledge of new material, while approximately 20% of each exam, except exam 1, will retest your knowledge of previously covered material.	120 points each
Final Exam	There will be a cumulative final exam	80 points
Weekly Writing Assignment	There will be a total of 14 weekly writing assignments. Assignments can be printed out and turned in, or submitted on Blackboard. Emailed assignments will not be accepted.	10 points each
Make it Stick Assignments	There will be an assignment for each chapter, 1-8, from this book. Assignment instructions will be posted on Blackboard. Assignments can be printed out and turned in, or submitted on Blackboard. Emailed assignments will not be accepted.	15 points each
Quizzes	There will be 11 quizzes, to be completed on Blackboard. You are not allowed to use notes or materials from class or outside of class to complete the quizzes.	5 points each
Pre-test	Each student will complete the pre-test. Students will receive full credit for taking the exam, regardless of how many questions are answered correctly. However, completion of this assignment is required to pass the class. Students who do not complete this assignment will receive a D or less in the class.	25 points
Post-test	Each student will complete the post-test. Students grade on the post-test will be determined by the number of questions answered correctly. Students who do not complete this assignment will receive a D or less in the class.	100 points
Total		
Grading Scale:		
1000 - 915: A	914 - 895: A-	
894 - 875: B+	874 - 815: B	814 - 795: B-
794 - 775: C+	774 - 715: C	714 - 695: C-
694 - 675: D+	674 - 615: D	614 - 595: D-
594 and below:	F	

Course Schedule:

Class Date	Class Discussion/Activities	Assignments
Aug. 24 – Aug. 28	Pre-test in laboratory	
Aug. 25	Introduction/syllabus CH 1: Biology themes	
Aug. 27	CH 2: Chemical context of life	Quiz 1, WA1
Sept. 1	CH 2: Chemical context of life CH 3: Water and life	
Sept. 3	CH 3: Water and life CH 4: Carbon chemistry	Quiz 2, WA 2, CH1
Sept. 8	CH 4: Carbon chemistry CH 5: Biological macromolecules	
Sept. 10	CH 5: Biological macromolecules	Quiz 3, WA3
Sept. 15	CH 5: Biological macromolecules CH 6: The cell	
Sept. 17	CH 6: The cell	Quiz 4, WA4, CH8
Sept. 22	CH 7: Membrane structure and func.	
Sept. 24	CH 7: Membrane structure and func.	Quiz 5, WA5
Sept. 28 – Oct. 2	Exam 1 (chapters 1-7) in laboratory	
Sept. 29	CH 8: Metabolism	
Oct. 1	CH 8: Metabolism	HW6, CH2
Oct. 6	Catch up or get ahead	
Oct. 8	CH 9: Respiration and fermentation	Quiz 6, HW7
Oct. 13	CH 9: Respiration and fermentation	
Oct. 15	CH 10: Photosynthesis	Quiz 7, HW8, CH3
Oct. 20	CH 10: Photosynthesis	
Oct. 22	CH 12: Cell cycle	Quiz 8, HW9
Oct. 26 – Oct. 30	Exam 2 (chapters 8-10) in laboratory	
Oct. 27	CH 12: Cell cycle	
Oct. 29	CH 13: Meiosis	HW10, CH4
Nov. 3	CH 14: Mendelian genetics	
Nov. 5	CH 14: Mendelian genetics	Quiz 9, HW11
Nov. 9 – Nov. 13	Exam 3 (chapters 12-14) in laboratory	
Nov. 10	CH 15: Chromosomes	
Nov. 12	CH 15: Chromosomes	HW12, CH5
Nov. 17	CH 16: Molecular basis inheritance	
Nov. 19	CH 16: Molecular basis inheritance	Quiz 10, HW13, CH6
Nov. 24	Thanksgiving – NO CLASS	
Nov. 26	Thanksgiving – NO CLASS	
Nov. 30 – Dec. 4	Post-test in laboratory	
Dec. 1	CH 17: Gene to protein	
Dec. 3	CH 17: Gene to protein	Quiz 11, HW14, CH7
Dec. 8	EXAM 4 (chap. 15-17) and FINAL (all)	
Dec. 10	EXAM 4 (chap. 15-17) and FINAL (all)	

I reserve the right to change this schedule to meet the needs of the class.

Student Responsibilities	
Safety Measures	<p>The safety of our College Family in this unprecedented time is our primary concern. Following guidelines presented by the Centers of Disease Control (CDC), the Indiana Health Department, and best practices among other institutions of higher education, we are requiring the following:</p> <ul style="list-style-type: none"> • Face coverings over the mouth and nose in all indoor public spaces, including classrooms, the library, the Tutoring Center, and faculty offices. • Because face coverings are in use, no eating or drinking in the classroom. Plan to meet your needs between classes using appropriate social distancing. • Daily self-monitoring. If you have a temperature of 100.4 or higher, or any symptoms of COVID-19 – fever or chills, a cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, loss of taste or smell, sore throat, or nausea or vomiting – stay home and consult the class policy for staying on track. • Disinfecting your personal space using the materials provided when you enter the classroom. • Maintaining physical distancing of at least six feet within classrooms and other common spaces. <p>Please note: To accommodate students who may not be able to attend class in person, this class may be taped and posted to the course Blackboard site. Tapes will not be used for any other purpose outside of class.</p>
What to Do in Case of Illness	<p>If you are exposed to COVID 19, become ill, or are otherwise unable to attend classes as required, notify the College by sending an email to illness@ccsj.edu. The message that you are unable to attend class will be relayed to your faculty. The College will contact you with expectations regarding next steps and follow-up.</p>
Attending Class	<p>You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. Being absent doesn't excuse you from doing class work; you have more responsibilities to keep up and meet the objectives of this course.</p> <p>Attendance Attendance is counted as being present from the first 10 minutes of class until the end of lecture/lab. Anyone missing after the first 10 minutes of class will be marked late. If you are still missing after the first 15 minutes of class, you will be marked absent unless a written excuse is provided within 24 hours of the occurrence. Similarly, anyone leaving early without a written excuse will be counted as absent.</p> <p>General Absences You are responsible for all material presented in class and all in-class announcements and assignments. If for whatever reason you have to miss class, please approach your fellow students for the notes you missed, and take advantage of the class materials that will be posted on Blackboard http://class.ccsj.edu</p>

ALL planned and unplanned absences must be communicated to your instructor via email (Subject: Last name, First name, "BIOL 115A Absent", Date) with a brief explanation.

Intellectual growth and success in college is reinforced through interaction in the classroom. Students reach personal goals and course outcomes through regular and prompt attendance. Therefore, three (3) unexcused absences will result in an administrative withdrawal from the course. Furthermore, excessive tardiness (every 2 late arrivals) will result in 1 absence. The student may be subjected to a grade of F or FW per the policy stated under the Withdrawal from Classes section on this syllabus.

Absence due to college events

We do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence 24 hours in advance according to the communication guidelines above, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have more responsibilities to keep up and meet the objectives of this course.

Exams

- If you are late for an exam, you must arrive before the first person leaves the room, otherwise you will not be allowed to take the exam and you will receive a 0.
- Cell phones are expressly prohibited during exams.
- All students are required to take the final exam.
- The final exam schedule is TBA.
- Items which students may not have near them during the exams include:
 - Coats, jackets, hats, or other items of outerwear
 - Backpacks, pencil cases, purses, or other bags
 - Cell phones or other electronic devices
 - Graphing calculators
 - Covers for non-graphing calculators

If you are not sure whether an item is permitted, please ask the instructor before the exam. No talking during exams. Items you are not permitted to have during exams should be placed at the designated area prior to the exam. Neither the instructor nor the department is responsible for any loss or theft of personal items. The instructor retains the right to issue an exam grade of zero to any student found to be in violation of one or more exam rules.

NO MAKE-UPS. Make-up exams will not be given except upon the discretion of the instructor. Athletic competition that interferes with exams will require documentation to be presented to the instructor by the end of the first week of classes. Extension requests for extenuating circumstances can be submitted via email to the instructor. In the event the instructor

	<p>approves the extension, a make-up exam will be scheduled within 2 days of the original exam date.</p> <p>If you require special accommodations for taking exams, please submit to the instructor the appropriate documentation from the Office of Disability, within the first week of the course to address your needs. Graded exams will not be distributed during lecture time. In order to obtain a copy of your exam, please stop during the instructors' office hours. You are free to go over the exams with the instructor in detail. Please see the note in the "Grading Scale". Final exams will not be returned to the students. You are free to come by and look at your exam, but the exam will not leave the instructors office.</p> <p>Note: If Zoom class sessions have been scheduled for this course, students should prepare to have both video and audio activated during each session. This means you should be visibly present and actively engaged during the session, not just audibly present with a picture or name as your screen. All zoom class sessions will occur at your class's originally scheduled day and time. For example, if your class was to meet on M/W from 12p to 1:30p, the zoom class session will meet at some point during this time. Scheduled Zoom class session dates and times can be found in the "Course Schedule" section of this syllabus.</p>
<p>Turning In Your Work</p>	<p>You cannot succeed in this class if you do not turn in all your work when due. Homework will not be accepted after the due date. Extension requests for extenuating circumstances can be submitted via email to the instructor. Decisions on make-up work are left to the discretion of the instructor</p>
<p>Meeting Standards for Classroom Behavior</p>	<ul style="list-style-type: none"> • Use all the class time. Come to class on time and stay in class until the end. Coming late, leaving early, and getting up during class disrupts the class and disrespects others. • Come prepared. Bring your texts, be prepared to take notes, and be able to demonstrate that you have completed the assignments for the day through your participation in class. • Respect others. Listen when your classmates and the instructor are speaking. Think about their contributions. Respond appropriately. • Use electronic devices only for class purposes. Engage with your classmates and the instructor without technological distractions.
<p>CCSJ Student Honor Code</p>	<p>This course asks students to reaffirm the CCSJ Student Honor Code:</p> <p>I, as a student member of the Calumet College academic community, in accordance with the college's mission and in a spirit of mutual respect, pledge to:</p> <ul style="list-style-type: none"> • Continuously embrace honesty and curiosity in the pursuit of my educational goals; • Avoid all behaviors that could impede or distract from the academic progress of myself or other members of my community; • Do my own work with integrity at all times, in accordance with syllabi, and without giving or receiving inappropriate aid;

	<ul style="list-style-type: none"> Do my utmost to act with commitment, inside and outside of class, to the goals and mission of Calumet College of St. Joseph.
Doing Your Own Work	<p>If you turn in work that is not your own, you will be subject to judicial review by the Faculty-Student Grievance Committee. These procedures can be found in the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.</p> <p>Using standard citation guidelines to document sources avoids plagiarism. You'll find guides to the major citation methods at the CCSJ Specker Library Web page at http://www.ccsj.edu/library/subjectsplus/subjects/guide.php?subject=cite</p> <p>You'll also find a comprehensive guide to understanding what constitutes plagiarism, "What Is Plagiarism," on the Specker Library Web page at https://www.ccsj.edu/library/What%20is%20Plagiarism.pdf This guide comes from Plagiarism.com, and covers many ways in which plagiarism can occur. Be sure to review this important source!</p> <p>Please note: All papers may be electronically checked for plagiarism.</p>
Sharing Your Class Experience	<p>Your voice matters! At the end of the term, you will have the opportunity to evaluate your classroom experience. These confidential surveys are essential to our ongoing efforts to ensure that you have a great experience that leaves you well prepared for your future. Take the time to complete your course evaluations – we value your feedback!</p>
Withdrawing from Class	<p>After the last day established for class changes has passed (see the College calendar in the CCSJ Course Catalog), you may withdraw from a course by following the policy outlined in the Course Catalog.</p>

Resources	
CCSJ Book Rental Program	<p>The CCSJ Book Program ensures that everyone has the right course materials on the first day of class to be successful. You pay a book rental fee each semester, and in return, receive all the materials for all your classes prior to the beginning of classes. At the end of the semester, simply return the books. For traditional students, the Book Rental Program is conveniently located in the library, where students can pick up and return their books. For students in accelerated programs and graduate programs, books will be delivered to their homes and they can return them by mail. For more information, see http://www.ccsj.edu/bookstore. All books must be returned at the end of the semester or you will incur additional fees, which will be charged to your student account.</p>
Student Success Center	<p>The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library. In addition, you can access online tutoring at Tutor.com. See the link within the Blackboard course.</p>
Disability Services	<p>Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA)</p>

	<p>guidelines. If you believe that you need a “reasonable accommodation” because of a disability, contact the Disability Services Coordinator at 219-473-4349.</p>
<p>Student Assistance Program</p>	<p>Through a partnership with Crown Counseling, Calumet College of St. Joseph provides a free Student Assistance Program (SAP) to current students. The SAP is a confidential counseling service provided to students for personal and school concerns which may be interfering with academic performance and/or quality of life. The SAP counselor is available on campus once a week and off-site at the Crown Counseling offices in Crown Point or Hammond. For more information, contact Kerry Knowles SAP Counselor, at 219-663-6353 (office), 219-413-3702 (cell), or kerryk@crowncounseling.org.</p>
<p>CCSJ Alerts</p>	<p>Calumet College of St. Joseph’s emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College’s website at: http://www.ccsj.edu/alerts/index.html.</p>