

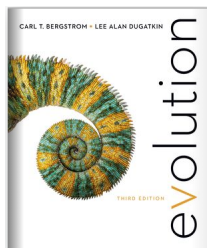
BIOL 265 EVOLUTIONARY BIOLOGY: 2023 FALL SYLLABUS

Lecture: Dr. Sandi Connelly

Lecture: TR 2-3:15pm
Lecture location: WAL 3430

Dr. C's email: sjcsbi@rit.edu

Dr. C's Office hours: TBD and by appointment (Zoom or in person)



Recitation: Dr. Elizabeth DiCesare

Recitation 1: Monday, 9-10:50am (WAL 3560)

Recitation 2: Wednesday, 2-3:50pm (WAL 4510)

Dr. DiCesare's Email: ewdsbi@rit.edu

Dr. DiCesare's Office hours: TBD and by appointment (Zoom or in person)

Required Text (hard copy or electronic!):

- [Evolution, 3rd Edition, Bergstrom and Dugatkin; with Norton Illumine Ebook, InQuizitive, and Animations;](#) ISBN: 978-1-324-03378-3
- Note: You may use the 2nd Edition of this text. Having access to some version is the most important as not every definition may be given in class, etc.

Recommended Text (hard copy or electronic):

- [Writing Papers in the Biological Sciences, 7th Edition | Macmillan Learning US](#)
Author: Victoria E. McMillan, ISBN: 9781319268466

Course Description:

This is a study of the historical framework of evolutionary biology and the meaning and nature of evidence pertinent to biological evolution. The topics include earth history, the evolution of proteins and the genetic code, cellular and metabolic evolution, molecular evolution, neutral theory vs. selection, genetic variation, natural selection, migration, mutation, genetic drift, fitness, population dynamics and genetics, species concepts and speciation, systematics and classification systems, molecular phylogenetics, the evolution of protozoans, plants, fungi, invertebrates and vertebrates, behavioral evolution, interactions among species, historical biogeography, human evolution and variation.

Grade Calculation: (lecture and recitation combined grade)

4 Lecture Exams (online)	= 50%
Reading Quizzes (drop 3)	= 10%
Lecture Activities	= 5%
Recitation Activities	= 10%
Recitation Project	= 25%

	A	B	C	D
(+)	--	87.0	77.0	--
(letter)	94.0	84.0	74.0	60.0
(-)	90.0	80.0	70.0	--

Final letter grades: You must EXCEED the value given to earn the grade. All grades below 60.0 will earn a F.

Time commitment:

Since this is a 4-credit hour course, you should plan to spend 5 hours engaging with class (3 hours in person for lecture, and 2 hours for recitation) and an additional ~8 hours on readings, research, discussions, assignments, etc. per week. The rule-of-thumb is 2 to 3 hours per week outside the "classroom" for every credit hour per week in the classroom. If you do the math, it adds to 12–16 hours per week, total.

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Course Websites and Technology Requirements:

Internet Connection:

For this course, a reliable and consistent internet connection is required. Please review the RIT [Computer Policy](#). A problem with your Internet access may not be used as an excuse for late, missing, or incomplete coursework. If you experience problems with your Internet connection while working on this course, it is your responsibility to find an alternative Internet access point, such as the library or Wi-Fi hotspot.

RIT MyCourses: <https://mycourses.rit.edu/>

Look here for: lecture outlines, study materials, recitation materials, and your grades. All links that you need to the textbook website are linked through MyCourses!

Zoom: rit.zoom.us

You may use Zoom for office hours. You will need to login to Zoom using your RIT account for those sessions.

Google Docs:

You will be using Google Docs to write collaborative writing assignments in recitation. You will need to access Google Docs using your [RIT account](#).

ITS Service Desk:

The ITS Service Desk is your point of contact for your RIT Computer Account, network, or technology-related issues. The Service Desk can: Troubleshoot your technology issues or create a [work request](#) ticket and connect you with ITS specialists. When you contact the ITS Service Desk by phone, e-mail, or in-person a ticket is created and shared with you. Your ticket allows you to track progress on your issue, communicate with ITS quickly, and refer back to the solution if you encounter the problem again. You can also leave ITS feedback on how we handled your problem.

- Phone Support: (585) 475-4357
- Web Form: help.rit.edu
- In Person: [Frank E. Gannett Hall, Room 1113](#)

Writing standards:

Written work should adhere to Standard American English. Please proof your papers before submitting them. We will grade for content, completeness, organization, spelling, grammar, and punctuation, as well as demonstration of knowledge gained in the course and your ability to apply it.

Attendance in the learning space (in-person, online, etc.):

RIT does not have a requirement for attendance in courses, however, it is reasonable for faculty to describe how attendance in class (either in person or remotely; synchronously or asynchronously) is critical for success in the courses. (<https://www.rit.edu/academicaffairs/policiesmanual/d040>).

We expect that students in my course will engage with the modality of my course as outlined, barring any unforeseen issues such as illness, quarantine, etc. Attending and engaging in class time with me and your peers is important for your learning the materials. In this class, attendance expectations can be met by attending in-person sessions, attending in person session synchronously via Zoom, attending Zoom office hours, and others to be defined as needed throughout the semester. If you have questions about your attendance and participation in this course, please contact us.

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Group work in the learning space (in-person, online, etc.):

Group work in this course is designed for the use of electronic devices to support your learning. We encourage you to bring your laptops, tablets, or smart phones with you to class as they may be useful to you in your navigation of group work in this space. Please remember, using personal electronic devices in the classroom can also be a distraction for you and for other students. Please silence notifications on all devices so that your work is not interrupted. Because of the arrangement of the space, others, including myself, will have an unobstructed view of your computer screen, which may be difficult to ignore. Please be respectful and do not use your devices for non-class related tasks, such as checking your Instagram page, doing homework for another course, or catching up on your email. We will ask that you minimize your laptop use during whole-class discussions.

Recitation Participation:

Participation in recitation will be calculated on a points scale. You can earn up to 10 points for each in-class assignment in recitation. These points will be based on overall participation in the activity, completion of the activity, and overall quality of the written assignment. These points will be entered in to MyCourses weekly and will be worth 10% of your final grade. If you are in class every day, awake, and doing the in-class activities as assigned, you will earn an A in participation. Guaranteed. But you **MUST** attend and participate to earn participation points! If you must be absent for extenuating circumstances beyond your control, please contact Dr. DiCesare before recitation to discuss the possibility of making up the work. Make up assignments are not guaranteed! More importantly, if you miss recitation you will quickly fall behind on your project, which is 25% of your final grade. If you are missing major steps in your project, you will not be successful on your final paper. The purpose of recitation is to help you become proficient in science communication. You must be present to communicate.

What students in this course can expect of Dr. Connelly and Dr. DiCesare:

- Grades will be posted on myCourses within 2 weeks of artifact submission, unless otherwise noted in the assignment. This is in accordance with the RIT Policy D05.0 Grades which states in part,
 - *“Faculty members must provide feedback for all submitted work within two weeks of the submission deadline. Posting grades to RIT’s Electronic Course Management System is required. The two-week posting requirement is waived in the case of deadline extensions, late submission of work, any extraneous circumstances, or when explicitly stated in the evaluation criteria.”* (<https://www.rit.edu/academicaffairs/policiesmanual/d050>).
- Posting of office hours and the location(s) can be found on myCourses and will be updated as needed. If those times do not work for you, you may always request an appointment via email.
- Email / Communication policy:
 - For this class, we will respond to your emails within **24 hours** Monday through Friday. If you do not hear from us in that time frame, please resend your email, as things do get lost. Over the weekend, do not expect an immediate response. Now, it is quite likely that you will receive your response in less than 24 hours, but it is not a guarantee.

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Policies Specific to this Course:

Course Modality:

This course has two components – the lecture and the recitation. Both the lecture and recitation are being delivered fully in person this semester and there is no online option available to you.

Late Assignment Policy:

Assignments submitted after the announced due date will receive a 10% grade deduction per day (including weekends). Work submitted after five days (including the weekend) past the original due date will not be accepted and will receive a zero.

Your instructor will review late requests and circumstances on a case-by-case basis and make decisions accordingly. If an emergency arises that prevents you from completing your work on time, please email the instructor as soon as possible so that arrangements can be made for you to keep up in the class. The late policy may be waived at the instructor's discretion in case of an emergency.

Changes to the syllabus:

We have provided this syllabus as guide to our course and have made every attempt to provide an accurate overview of the course. However, as instructors, we reserve the right to modify this document during the semester, if necessary, to ensure that we achieve course learning objectives. You will receive advance notice of any changes to the syllabus through myCourses/email.

Course Policy Regarding the Use of Artificial Intelligence (AI) in Coursework:

ChatGPT and other generative AI products are widely used at this point in our world. In this class, we will focus on developing skills such as critical thinking, creativity, generating hypotheses or new ideas, and communication. These are all skills designed to help you in your development and future. I encourage you to think of using these applications, when appropriate, as a tool that can aid you in your work but not as a substitute for your own ideas. In other words, using these tools should supplement your own ideas rather than replace them. We encourage you to develop your own ideas and engage in independent thinking, as this will help you learn and grow as a student and as a future professional.

This course assumes that work submitted by students—all process work, drafts, low-stakes writing, final versions, and all other submissions—will be generated by the students themselves, working individually or in groups. This means that the following would be considered violations of academic integrity: a student has another person/entity do the writing of any substantive portion of an assignment for them, which includes hiring a person or a company to write essays and drafts and/or other assignments, research-based or otherwise, and using artificial intelligence affordances like ChatGPT.

Before collaborating with an AI chatbot on your work for this course, please request permission by sending me a note that describes (a) how you intend to use the tool and (b) how using it will enhance your learning. Any use of AI to complete an assignment must be acknowledged in a citation that includes the prompt you submitted to the bot, the date of access, and the URL of the program.

In all academic work, the ideas and contributions of others must be appropriately acknowledged and work that is presented as original must be, in fact, original. Using an AI-content generator (such as ChatGPT) to complete coursework without proper attribution or authorization is a form of academic dishonesty. If you are unsure about whether something may be plagiarism or academic dishonesty, please contact your instructor to discuss the issue. Faculty, students, and administrative staff all share the responsibility of ensuring the honesty and fairness of the intellectual environment.

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RIT POLICIES:

Starfish:

This course participates in the RIT Starfish academic alert system, which is designed to promote student success through communication between students, instructors, and advisors. We will send a whole-class status update to all students before the semester midpoint. When we are concerned about an individual student's academic performance, we may raise an academic alert to notify the student as well as their advisor(s). On the other hand, when a student is doing well, we may send a "kudos" message. If you receive an academic alert email, it is your responsibility to contact us as soon as possible to discuss the issue, its potential impact on your success in the course, and identify people and resources to help you move forward. For more information about the Starfish system, visit <http://www.rit.edu/starfish>.

Statement on Reasonable Accommodations:

RIT is committed to providing academic adjustments to students with disabilities. If you would like to request academic adjustments such as testing modifications due to a disability, please contact the Disability Services Office (DSO). Contact information for the DSO and information about how to request adjustments can be found at <https://www.rit.edu/disabilityservices/>. After you receive academic adjustment approval, it is imperative that you see me during office hours so that we can work out whatever arrangement is necessary.

Academic Integrity Statement:

As an institution of higher learning, RIT expects students to behave honestly and ethically at all times, especially when submitting work for evaluation in conjunction with any course or degree requirement. RIT Online encourages all students to become familiar with the [RIT Honor Code](#) and with [RIT's Academic Integrity Policy](#). Do not cheat. Avoid the appearance of cheating in this class. Do not allow others to cheat from you.

D.08.0 Student Academic Integrity Policy (<https://www.rit.edu/academicaffairs/policiesmanual/d080>)

IV. ACADEMIC INTEGRITY A breach of student academic integrity falls into three basic areas: cheating, duplicate submission and plagiarism

- Cheating: Cheating is any form of fraudulent or deceptive academic act, including falsification of data, possessing, providing, or using unapproved materials, sources, or tools for a project, exam, or body of work submitted for faculty evaluation.
- Duplicate Submission: Duplicate submission is the submitting of the same or similar work for credit in more than one course without prior approval of the instructors for those same courses.
- Plagiarism: Plagiarism is the representation of others' ideas as one's own without giving proper attribution to the original author or authors. Plagiarism occurs when a student copies direct phrases from a text (e.g. books, journals, and internet) and does not provide quotation marks or paraphrases or summarizes those ideas without giving credit to the author or authors. In all cases, if such information is not properly and accurately documented with appropriate credit given, then the student has committed plagiarism.
- If you are caught cheating on any assignment or exam, appropriate academic disciplinary action will be taken to the fullest extent allowed by the University. Refer to your "Students Rights and Responsibilities" handbook for further guidance on the Academic Dishonesty policy at RIT.

Statement on Title IX:

Title IX violations are taken very seriously at RIT. RIT is committed to investigate complaints of sexual discrimination, sexual harassment, sexual assault and other sexual misconduct to ensure that appropriate action is taken to stop the behavior, prevent its recurrence, and remedy its effects. Please view the [Title IX Rights and Resources at RIT](#)

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Diversity, Inclusion, and Respect:

RIT has put forth [Policy P05.0 Diversity Statement](#) for all community member. RIT through its policies and practices is responsible for building an inclusive environment where membership in the community allows for faculty, staff and students to reach their fullest potential, both professionally and personally. RIT is committed to the development, administration and interpretation of policies and procedures in a way that is consistent with our commitment to diversity and is in compliance with federal, state and local laws. RIT's policies and procedures are administered in a way that supports fair treatment for all faculty, staff, students, and the RIT community at large.

Course Copyright Policy:

All course materials students receive or to which students have online access are protected by copyright laws. Students may use course materials and make copies for their own use as needed, but unauthorized distribution and/or uploading of materials without the instructor's express permission is strictly prohibited. RIT Policy C03.2 Copyright Policy addresses this issue (<https://www.rit.edu/academicaffairs/policiesmanual/c032>). For example, uploading completed labs, homework, or other assignments to any study site constitutes a violation of this policy. Students who engage in the unauthorized distribution of copyrighted materials may be held in violation of the University's Code of Conduct, and/or liable under Federal and State laws.

Changes to the University Calendar:

In the event that there is a significant change to the University calendar, this syllabus will be modified to meet those changes, if necessary. Modifications will be shared immediately with our class via myCourses and communications directly from your instructors.

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Counseling and Psychological Services:

Many students at RIT face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

Located on the second floor of the August Center building (above the Student Health Center), [Counseling and Psychological Services](#) provides confidential and personalized services to meet the mental health needs of currently enrolled, undergraduate and graduate students on the Henrietta campus.

Our mission is to enhance the RIT student potential for learning and success and to promote the emotional health and well-being of the campus community through:

1. Providing responsive, empirically-based, and culturally competent mental health services that include:
 - Short-term individual psychotherapy
 - Group counseling and psychotherapy
 - Urgent Care crisis intervention
 - Assessment and evaluation
 - Psychiatric services
2. Providing graduate clinical training in counseling, psychotherapy and college mental health
3. Providing campus-wide consultation and education

Campus Location: 2100 August Center, second floor

Phone:

During Business Hours: 585-475-2261

After Business Hours, Weekends/Holidays: 855-436-1245

Fax: 585-475-6548

Email: caps@rit.edu

NOTE: DO NOT USE E-MAIL IN AN EMERGENCY SITUATION, since you cannot be assured that a counselor will open it at your time of need.

Emergency Contacts:

For urgent matters during business hours, contact Counseling and Psychological Services at **585-475-2261**.

For urgent matters that cannot wait for business hours, call 1-855-436-1245 to speak with a mental health provider or call Public Safety at **585-475-3333**.

National Suicide Hotline: **1 800 273-8255**

Crisis Text Line: Text **HOME** to **741741**

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Educational Resources:

Everyone in the RIT Community is dedicated to your success. With this, you need to avail yourself of help when you need it! Faculty are your first stop. What can we do to help you in the course, or with navigating RIT? Your Academic Advisor should be on speed dial! They are an amazing wealth of information for you and can help you with everything professional, personally, and beyond!

In some cases you already know that you need very specific help. Have trouble with time management, note taking in class, just getting your academic self together? Check out all of the resources the RIT Academic Success Center has to offer! <https://www.rit.edu/studentaffairs/asc/> From workshops to individual coaching, they have only your success in mind.

Have a paper that you just can't wrap your head around ... or can't even get started? The University Writing Program is here to help you! <https://www.rit.edu/academicaffairs/writing/>. Schedule an appointment for a consultation, or peruse all of their online tutorials for writing (<https://www.rit.edu/academicaffairs/writing/online-writing-commons-0>), just do not let writers block keep you from succeeding! Have a presentation to give 4 weeks from now and you already have stage fright?! Check out the Tips for Developing an Effective Presentation (<https://www.rit.edu/studentaffairs/atc/tips-develops-effective-presentation>) to get started. Have your presentation together and now you just need to building your presenting courage? Make an appointment with the Expressive Communication Center (<https://library.rit.edu/expressive-communication-center>), or in their space in Wallace Library (Room 2550) for getting it all together. Hey – and while you are in Wallace Library – your friendly librarian can help you find good resources for that presentation (not just google and Wikipedia!). Each College has a librarian who would love to meet you and talk about what you need to succeed (<https://library.rit.edu/staff>). These are just come of the places on campus that are ready and willing to help you any time. The RIT Student Life website includes descriptions of all of the departments on campus available to help you (<https://www.rit.edu/studentlife/departments>). If you still need more resources ... ask me or your Academic Advisor and we will help you pinpoint that resource. Of course, asking more than two hours before you need to submit your assignment is always preferred!

Concluding statement:

Most importantly, please be assured that we want students to learn and to receive the good grades they have earned and deserve. Please make an appointment with one of us should you have undue difficulty with your work in this course.

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Evolutionary Biology Lecture Calendar

Week	Class Day (T/R)	Topic	Text Reference
1	Aug 29	Overview of Evolutionary Biology	Ch 1
	Aug 31	Overview of Evolutionary Biology	Ch 1
2	Sept 5	Early Evolutionary Ideas	Ch 2
	Sept 7	Early Evolutionary Ideas	Ch 2
3	Sept 12	Natural Selection	Ch 3
	Sept 14	Natural Selection	Ch 3
4	Sept 19	Exam #1 (On myCourses)	
	Sept 21	Phylogeny & Evolutionary History	Ch 4
5	Sept 26	Transmission Genetics	Ch 6
	Sept 28	Transmission Genetics	Ch 6
6	Oct 3	Genetics of Populations	Ch 7
	Oct 5	Genetics of Populations	Ch 7
7	Oct 10	NO CLASS – Fall Break	
	Oct 12	Genome Evolution	Ch 10
8	Oct 17	Genome Evolution	Ch 10
	Oct 19	Exam #2 (On myCourses)	
9	Oct 24	Origin and Evolution of Early Life	Ch 11
	Oct 26	Evolution and Development	Ch 13
10	Oct 31	Evolution and Development	Ch 13
	Nov 2	Species and Speciation	Ch 14
11	Nov 7	Species and Speciation	Ch 14
	Nov 9	Exam #3 (On myCourses)	
12	Nov 14	Extinction and Evolutionary Trends	Ch 15
	Nov 16	Sex and Sexual Selection	Ch 16
13	Nov 21	Sex and Sexual Selection	Ch 16
	Nov 23	NO CLASS – Thanksgiving Break	
14	Nov 28	Coevolution	Ch 18
	Nov 30	Evolution, Medicine & Humans	Ch 20
15	Dec 5	Exam #4 (On myCourses)	
	Dec 7	<i>TBD – Something fun</i>	

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Evolutionary Biology Recitation Calendar

Week	Class Day (M or W)	Topic	Assignments to be submitted in recitation
1	Aug 28	Introduction to scientific communication	Paper summary
	Aug 30		
2	Sept 4	No recitation – Labor Day Sept 4	
	Sept 6		
3	Sept 11	Database Training	
	Sept 13		
4	Sept 18	How to read a scientific paper	Paper summary
	Sept 20		
5	Sept 25	Structured peer review	Paper analysis draft for peer review
	Sept 27		
6	Oct 2	Figures and data presentation	<ul style="list-style-type: none">• Paper analysis for instructor feedback• Bring a figure to class• Redesigned figure
	Oct 4		
7	Oct 9	No recitation – Fall Break	
	Oct 11		
8	Oct 16	Journal vs. Popular articles	Popular science article
	Oct 18		
9	Oct 23	Cave fish case study	Case study written assignment
	Oct 25		
10	Oct 30	Structured peer review	Annotated bibliography draft for peer review
	Nov 1		
11	Nov 6	Coevolution case study	<ul style="list-style-type: none">• Case study presentation• Annotated bibliography for instructor feedback
	Nov 8		
12	Nov 13	Evolution & public health case studies	Case study presentation
	Nov 15		
13	Nov 20	No recitation – Thanksgiving Break	
	Nov 22		
14	Nov 27	Evolution and Conservation	Case study presentation
	Nov 29		
15	Dec 4	Structured peer review	Research proposal draft for peer review
	Dec 6		
	Dec 13, 11:59pm	Research proposal for instructor review	

Note: Recitation items in bold to be completed outside of class time and turned in to the correct assignment folder on myCourses!