Biology 101-13 (#18391): Elements of Biology
Spring 2018 Syllabus

Instructor Information

Instructor: Maryanne Menvielle, M.S.
Office: MH 045 (in the basement)
Office Hours: Tuesday & Thursday 10:00am-11:00am; Also by appointment
Office Telephone: 657-278-5125 (Only during office hours)
E-mail: mmenvielle@fullerton.edu

***Email is the preferred method of communication for this course. Emails will be checked twice daily Monday through Friday and at least once on the weekend. Responses to emails will usually occur within 10 hrs but may take as long as 24 hrs with the exception of weekends, holidays or other times the campus is closed.

NOTE: Emails must be written with proper etiquette in mind. This means they should: 1) contain a greeting to the person you are sending it to; 2) contain a subject line relevant to the contents; 3) be composed properly (no “text talk”); 4) be signed with your full name AND course information (in this case your emails should state Biol 101-13)

Course Description (from catalog):
Underlying principles governing life forms, processes and interactions. Elements of biology and reasoning skills for understanding scientific issues on personal, societal and global levels. For the non-science major. No credit toward biological science major.

Textbook & Course Materials

- Internet connected device to bring to class (smartphone, tablet, computer, etc.)
- 3 Scantrons #1712

Helpful Resources

- For writing assignments utilize the resources available: CSUF Writing Center (CSUF writing Center http://english.fullerton.edu/writing_center/ ) or the University Learning Center (University Learning Center page http://www.fullerton.edu/ulc)
- Tutoring is available through the University Learning Center (University Learning Center http://www.fullerton.edu/ulc) located on the second floor of Pollak Library North. Call (657) 278-2738 for an appointment.
- Office of Disability Support Services is located in University Hall 101. Call (657) 278-3112 for an appointment.
- As a student, health and psychological services are available at the Student Health and Counseling Center (http://www.fullerton.edu/studentwellness/). For student health services call (657) 278-2800. To make an appointment with Counseling and Psychological Services (CAPS) call (657) 278-3040.
- Academic advising can be provided by Academic Advisement Center located in University Hall 123B. For more information call (657) 278-3606.
Course Structure

This is a hybrid course which is defined in UPS 411 as having “more than 20% but less than 80% of the class meeting time taught online”. The online component of the course will be delivered through the learning management system Titanium. You will use your Titanium account to login to the course through the portal at fullerton.edu. In Titanium, you will access online lessons, course materials, some assignments and additional resources. Students must complete the online components before coming to class. In class activities will reinforce and extend the concepts covered during the online component.

Titanium Access

Firefox is the preferred Web browser to access this course on Titanium. If you do not already have Firefox, you can download it from Firefox at https://www.mozilla.org/en-US/ You may also need to download plug-ins (ex. Flash) to view some of the course resources or disable the pop-up blockers on your computer to allow downloads from the Titanium course site.

Technology Requirements

- All entering students are expected to be knowledgeable in the use of a personal computer (PC or Macintosh) prior to being admitted to the university. Entering students should have 1) the ability to use a PC to locate, create, move, copy, delete, name, rename, and save files and folders on hard drives and on secondary storage devices such as floppy disks; 2) the ability to use a word processing program that runs on a PC or Macintosh computer to create, edit, format, store, retrieve, and print documents; 3) the ability to use an electronic mail system to receive, create, edit, print, save, and send an e-mail message with and without an attached file; and 4) the ability to use an Internet browser to search the World Wide Web. Students who feel they do not meet the expected level of competency, should contact the Academic Advisement Center at 657-278-3606 or visit http://www.fullerton.edu/aac/.

- Hardware, Software, and Infrastructure Requirements
  - **Hardware:** You will need to have access to a reliable computer to complete the online portions of the course and an internet connected device for class meetings. It is recommended that you identify an alternative computer in case a technical issue arises. Students may request a laptop for the semester through the Long-Term Laptop Checkout program at CSUF. More information can be found at http://www.fullerton.edu/it/students/sgc/longtermlaptop.php
  - **Software:** You will need a word processing program. If you have an older or rare software program, it must be able to save files in .RTF or .DOC. As a CSUF student, MS Office may be purchased at a reduced rate from the Titan Shops.
  - **E-mail account:** Announcements and information about the course will be sent to your CSUF email account.
  - **Internet:** You must have regular access to a reliable internet connection. If you are using a connection other than the campus network, it is your responsibility to ensure that your internet connection will allow you to complete required coursework (which will include streaming videos through Titanium).
Technical Assistance

- The CSUF Help desk can be contacted at: StudentITHelpDesk@fullerton.edu or 657-278-8888. Walk-in help is also available at the Student Genius Corner (SGC) located on the 1st floor Pollak Library North. Self-help guides are available at titaniumhelp.fullerton.edu/m/StudentSelf-HelpGuide

Course Objectives

Student Learning Outcomes:
This course meets the General Education learning goals for Area B.2 Scientific Inquiry and Quantitative Reasoning: Life Science.
The goals for Bio 101 are for student learning of the following major scientific ideas:

a. Living things are made of smaller structures whose functions enable the organism to survive.
   Biology 101 Students should be able to:
   - Define the characteristics of life
   - Differentiate between the main classes of biologically important molecules.
   - Summarize cell theory
   - Explain the processes associated with cell growth & division
   - Compare & contrast characteristics of prokaryotic & eukaryotic cells
   - Relate cell structure to cell function
   - Explain how an organism maintains homeostasis
   - Organize functions within levels and explain relationships between levels of biological organization (cell, tissue, organ, organ system, organism)

b. Living things depend on each other and the physical environment as they interact to obtain, change, and exchange matter and energy.
   Biology 101 Students should be able to:
   - Describe how energy from the sun drives most activities on the earth’s surface
   - Sketch the flow of energy & matter through higher levels of biological organization
   - Explain the ways in which organisms may interact
   - Identify factors that affect population growth and decline
   - Identify factors that affect ecological organization at the community & ecosystem level
   - Assess the role of humans in natural systems
   - Describe & give examples of the value of biodiversity & the natural world

c. The great diversity of living things is the result of billions of years of evolution of organisms through the mechanisms of heredity, random change, and natural selection.
   Biology 101 Students should be able to:
   - Illustrate the Central Dogma
   - Explain & apply the basic principles of inheritance
   - Summarize the evidence for evolution
   - Describe how different processes (e.g. mutation, gene drift, selection) can lead to genetic differentiation and speciation
   - Define and explain natural selection
   - Interpret evolutionary relationships among organisms
   - Explain how evolutionary principles & ideas influence daily lives (eg GMOs, AIDS, antibiotic resistance)
Student Learning Outcomes continued:
Biology 101 students will also possess the following skills:

Biology 101 Students should be able to:
- Retrieve information from a variety of sources (eg popular press, scientific papers)
- Apply the scientific method
- Critically evaluate data accurately (graphs, tables, text)
- Critically evaluate claims rather than accept authoritative statements
- Recognize the historical context of science
- Differentiate between science and non-science
- Analyze societal issues based on biologically sound principles
- Justify opinions on social issues related to biology (stem cells, GMO)

In order to meet the General Education objectives for the Natural Sciences and Life Sciences, this course will introduce you to the basic principles of biology, and will give you the tools to think like a biologist. The critical and creative thinking skills that you develop as you “do” science will help you in many areas of your life. For example, if members of your family have suffered from diabetes, how would you use genetic information about susceptibility to diabetes in thinking about your diet, and in planning whether to have children? If you choose not to have children, or to wait, what form of birth control should you use? If you choose to have children, should you feed them genetically engineered food? What about organic food?

Course Activities
All assignments 1) are required to be completed independently unless otherwise stated 2) must be submitted in the format requested 3) must be completed according to the directions. Deadlines for assignments are stated on the schedule.

- Weekly Prep Work (15% of overall grade): Student are required to read, view lecture material and take notes prior to class. To ensure students are prepared, various assignments are to be completed and submitted online prior to class sessions.
- In-Class Activities (15% of overall grade): These are the only assignments that students are allowed to collaborate on. Students will be assigned to a group to complete in-class activities. Groups will change every unit and each group member will be required to evaluate the performance of all members. In-class activities will include completing written activities and online responses. Points for in-class activities are only awarded to students to attend and participate the entire class session. In-class activities may not be made up for credit unless the student qualifies for a make-up (see Make-Up Policy)
- Wrap-Up Assignments (20% of the overall grade): Students will complete various assignments that are submitted online which reinforce the weekly concepts. Some of these assignments fulfill the University’s writing requirement and will require you to utilize critical thinking skills and apply the current concept to a new situation. Grading may be based on both the ability to accurately explain or discuss the biological concept as well as the quality of writing. Specific feedback on the quality of the student’s writing as well as suggestions for improvement will be provided to the student. Students are encouraged to incorporate this feedback when completing future assignments. Grades will usually be posted on Titanium within 2 weeks of the assignment deadline.
- Exams (50% of overall grade): There are 3 exams that will test your understanding of the material and your ability to understand your understanding in solving novel problems. Scantron 1712, a picture ID and your 9-digit CWID is needed for all exams. Grades will be posted on Titanium within 10 – 14 days of the exam. You may review your exam during office hours or by appointment.
Grades will be posted on Titanium for you to review. You are expected to regularly (i.e. weekly) check your scores for accuracy and bring any questions to the instructor in a timely manner (see Re-grade policy).

Your grade in this course will be assessed as follows:

- Prep Assignments (15%)
- In-Class Assignments (15%)
- Wrap-Up Assignments (20%)
- Exams (50%)

**Letter Grade** | **Percentage**
--- | ---
A | 92.0 - 100%
A- | 90.0 – 91.9%
B+ | 88.0 – 89.9%
B | 82.0 – 87.9%
B- | 80.0 – 81.9%
C+ | 78.0 – 79.9%
C | 72.0 – 77.9%
C- | 70.0 – 71.9%
D+ | 68.0 – 69.9%
D | 60.0 – 67.9%
F | < 59.9%

**Extra Credit:** While I don’t intend to offer any extra credit, if it is offered, the extra credit assignment will be available to all students on an equitable basis. Please do not ask for an individual assignment that is in addition to anything offered to the entire class.

**Course Policies**

**Student Responsibilities**
Students are expected to:

- **Spend 6-9 hours each week on this course.** You may spend slightly more or less depending on your level of knowledge and work habits, but be prepared to spend a significant amount of time on this class.
- Check their fullerton.edu email daily for course updates.
- Complete prep assignments prior to coming to class. Students who have not completed the prep assignment will not be allowed to work with their group.
- Read assigned material in the text, and view ALL lecture and support material and take quality notes using the note-taking guides.
- Listen actively to lectures – think about the material
- Ask questions to both the instructor, and your classmates (via message boards)
- Complete all assignments – With the exception of in-class activities, students may NOT work on course assignments with anyone.
- Keep track of deadlines
- Check your grades weekly
- Save digital receipts and score summary reports. These are acceptable forms of documentation if there is grading discrepancy.
- Sign the “Use of Electronic Devices Agreement”
- Have access to a reliable internet connection and device. In case of technical issues it is the student’s responsibility to find an alternative prior to course deadlines.
Attendance and Participation
Attendance is not required, but is VERY beneficial to the learning experience. If you are not in class on a particular day, you will receive a zero for any work done or submitted that day. If you must miss class it is your responsibility to obtain the information covered. Eating, drinking, or non-academic use of cellular telephones in class is not allowed. Behave in a manner that does not disturb the rest of the class. To facilitate an open and safe learning environment, I expect students to be respectful and mature during discussions.

Exam Policy
Students are expected to abide by the University’s policy of academic integrity (more information below) during exams. The following are policies for this course:

- Students may be assigned seats during an exam.
- Students who arrive late will not be given additional time to complete the exam.
- Students arriving after someone has finished the exam will not be given the test.
- Students may not leave the room for any reason and return to complete the exam.
- All electronic devices must be turned off and put away (this includes ear buds).
- Students may be required to produce a valid ID and their CWID to take an exam.
- Student’s hands must remain on or above the desk at all times.
- Failure to follow all instructions may result in a zero for the entire exam.

Re-Grading Policy
As a human, I may make mistakes. If you feel that a mistake has been made in the grading of an assignment, discussion or quiz, please contact me within 2 weeks of the grade being posted on Titanium.

Make-Up Policy
Work can be made up or rescheduled ONLY under the following conditions with proper documentation and is solely at the instructor’s discretion:

- Arrangements are made a week or more prior to the exam or assignment for important, unavoidable conflicting activities (e.g. surgery, jury duty, etc.). Documentation is required.
- For illness, personal tragedy, or unavoidable emergencies, email before the exam or within one day thereafter.
- Paper and pencil in-class assignments can only be made up during office hours if the student can document a valid reason for the absence (ex. doctor’s note). Points awarded for participation with the class response system cannot be made up.
- Contact the instructor to find out if you qualify for make-up exams or assignments. All exams will be made up during finals week, unless other arrangements are made at the instructor’s discretion.
- Late prep or wrap-up assignments are not accepted without a documented reason and acceptance is up to the discretion of the instructor.
- Technical issues involving either the device used or the internet connection are NOT valid reasons for extensions.
- Failure to follow the above guidelines will result in a zero grade for an exam or assignment.
**Withdrawal Policy**
The CSUF policy regarding withdrawal from classes (UPS 300.016) will be followed. After the first two weeks of the semester, students may be granted withdrawal ONLY by presenting compelling evidence outlining a physical, medical, or emotional condition that prevents completion of the course. Poor academic performance is not evidence of a serious reason for withdrawal. Students unable to produce official documentation will be required to take the grade they have earned in the class. Please refer to the course schedule for information on the last day to withdraw with a W grade. Important dates concerning registration are on the inside cover of the CSUF Class Schedule or at the Admissions webpage [http://www.fullerton.edu/admissions/](http://www.fullerton.edu/admissions/).

- The withdrawal deadline for this semester is: April 20, 2018.

**Student Accommodations**
As your instructor, I feel I have a responsibility to do everything within reason to actively support a wide range of leaning styles and abilities. As such, I have incorporated a variety of presentation types and assessments into the course. Feel free to discuss your progress in this course with me at any time.

The University requires students with disabilities to register with the Office of Disability Support Services (DSS), located in UH-101 and at 657-278-3112, in order to receive prescribed accommodations appropriate to their disability. Students requesting accommodations should inform the instructor during the first week of classes about any disability or special needs that may require specific arrangements/accommodations related to attending class sessions, completing course assignments, writing papers or quizzes/tests/examinations.

**Faculty Obligation to Meet Classes**
In the event of an emergency that disrupts normal campus operations or causes the University to close for a prolonged period of time due to circumstances such as an earthquake, we will do our best to continue the class via Titanium, if it is available. Therefore, as soon as possible after such as event and at least once a day, check the class Titanium site and your CSUF email for messages and instructions. You can obtain emergency information about campus operations on the CSUF web site, via the Fullerton Campus Operation & Emergency Closure Line (657-278-4444) or the Irvine Campus Operation & Emergency Closure Line (657-278-8676).

**Use of class email lists in TITANium**
In the past, there were a couple of incidents of students using class email lists to contact members of the class about non-course related items, such as voting for a specific student in elections, announcing events on campus in which the student was involved, etc. Students should not use contact information from this course without prior permission. Any violations of this policy may result in disciplinary action.

**Important Note:** This syllabus, along with course assignments and due dates, are subject to change. It is the student’s responsibility to check Titanium for corrections or updates to the syllabus. Any changes will be clearly noted in a course announcement or through Titanium email.
Academic Honesty Policy & Procedures

Academic Integrity: It is assumed that by enrolling in this class your intentions are honorable, that you accept responsibility for earnest effort toward understanding the subject, and that you will not cheat on any assignment for this course. You must perform all of your own work. The CSUF policy statement is reproduced in part below.

- Academic dishonesty includes such things as cheating, inventing false information or citations, plagiarism, and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show a possession of a level of knowledge or skill, which he/she in fact does not possess.

- Cheating is defined as the act of obtaining or attempting to obtain credit for work by the use of any dishonest, deceptive, fraudulent, or unauthorized means. Examples of cheating include, but are not limited to, the following: using notes or aids or the help of other students on tests and examinations in ways other than those expressly permitted by the instructor, plagiarism as defined below, tampering with the grading procedures, and collaborating with others on any assignment except when collaboration with your classmates is explicitly allowed or encouraged. Violation of this prohibition of collaboration shall be deemed an offense for the person or persons collaboration on the work, in addition to the person submitting the work.

- Plagiarism is defined as the act of taking the work of another and offering it as one’s own without giving credit to that source. When sources are used in a paper, acknowledgment of the original author or source must be made through appropriate references and, if directly quoted, quotation marks or indentations must be used.” (CSUF Policy 300.021, effective 6 May 2005). Please make sure you understand what plagiarism is and how to avoid it. For more information on this topic please see http://www.fullerton.edu/deanofstudents/judicial/Plagiarism.htm.

- Authentication of student work: Authentication of student work is accomplished by requiring multiple types of assessments: formal papers, assignments, email contact with the instructor, short quizzes, and longer exams. Students may be asked to meet with the instructor for further authentication.

Students who violate university standards of academic integrity are subject to disciplinary sanctions. University policies are strictly enforced in this course. Please familiarize yourself with the academic integrity guidelines found in the current student handbook. All acts of academic dishonesty will be reported to the Dean. The minimum penalty for cheating or plagiarism in this course is 10% of the final course grade, even if the assignment in question was worth significantly less than that. The maximum penalty is failure of the course. Penalties are given based on the severity of the incident (as determined by the instructor) and the weight of the assignment/discussion/quiz in question. Penalties are at the instructor’s discretion.
Classroom Safety Briefing

- In the event of an emergency such as earthquake or fire:
  - Take all your personal belongings and leave the classroom (or lab). Use the stairways located at the east, west, or center of the building.
  - Do not use the elevator. They may not be working once the alarm sounds.
  - Go to the lawn area. Stay with class members for further instruction.
  - For additional information on exits, fire alarms and telephones, Building Evacuation Maps are located near each elevator.
  - Anyone who may have difficulty evacuating the building, please see me after class.
- Dial 911 on any campus phone, pay phone, or blue emergency phones to connect directly to University Police. Dialing 911 on your cell phone will connect with the Highway Patrol. Tell CHP dispatcher that CSUF Police are the responding agency. Stay on the line until asked to hang up.
- If you want to bring visitors to the classroom, you must obtain permission from the instructor in advance and must sign a volunteer form.

Emergency Procedures Notice to Students: The safety of all students attending California State University Fullerton is of paramount importance. During an emergency it is necessary for students to have a basic understanding of their personnel responsibilities and the University’s emergency response procedures. In the event of an emergency please adhere to the following guidelines

Before an emergency occurs-
1. Know the safe evacuation routes for your specific building and floor.
2. Know the evacuation assembly areas for your building.

When an emergency occurs-
1. Keep calm and do not run or panic. Your best chance of emerging from an emergency is with a clear head. Evacuation is not always the safest course of action. If directed to evacuate, take all of your belongings and proceed safely to the nearest evacuation route.
2. Do not leave the area, remember that faculty and other staff members need to be able to account for your whereabouts.
3. Do not re-enter building until informed it is safe by a building marshal or other campus authority.
4. If directed to evacuate the campus please follow the evacuation routes established by either parking or police officers.

After an emergency occurs-
1. If an emergency disrupts normal campus operations or causes the University to close for a prolonged period of time (more than three days), students are expected to complete the course assignments listed on the syllabus as soon as it is reasonably possible to do so.
2. Students can determine the University's operational status by checking the University's web site at http://www.fullerton.edu, calling the University’s hotline number at 657-278-0911, or tuning into area radio and television stations. Students should assume that classes will be held unless they hear or read an official closure announcement.
CSUF is a smoke free campus

California State University, Fullerton prohibits smoking in all interior and exterior campus areas and locations effective August 1, 2013 as specified below:

- Buildings (including residence halls), structures (including parking structures), and outdoor areas owned, leased or rented by the university or one of its auxiliaries whether located on or off the Fullerton main campus.
- Vehicles owned, leased or rented by the university or one of the university’s auxiliaries.
- Vehicles on university-owned, leased, or rented land or in university-owned, leased, or rented parking structures.

The sale or distribution of any tobacco product, including smokeless tobacco products, also is prohibited.

The course material and assignments are my intellectual property. They may not be posted or shared on outside web sites. If I track a posting back to you from an outside source, you will be referred to the Dean for an act of academic dishonesty, even if the semester has ended.
Use of Electronic Devices Agreement

If used properly, computers and other devices can greatly benefit the student. Unfortunately, there are many situations where electronic devices are actually a distraction and disrupt the learning process. Computers, tablets, and other devices are permitted to be used in this course under the following conditions (initial each statement).

_______ Devices may only be used to access relevant course material.

_______ Devices must be turned off or completely put away when instructed.

_______ Any improper use of the device will result in the removal of the student from class that day.

_______ If the device is a distraction to other students or the instructor, the student may be asked to move or turn off the device.

_______ Students using an electronic device are asked to sit in the back or sides of the classroom to minimize the distraction to others.

I understand that using electronic devices in the classroom is a privilege and that I agree to following the above guidelines.

______________________  ______________________  ______
Name                              Signature                      Date
ASSIGNMENT AND LECTURE SCHEDULE
LECTURE SCHEDULE AND ASSIGNMENTS ARE SUBJECT TO CHANGE AT THE DISCRETION OF THE INSTRUCTOR. IT IS IMPORTANT THAT YOU ATTEND CLASS, AND CHECK TITANIUM IN EVENT OF ABSENCE.

<table>
<thead>
<tr>
<th>Week</th>
<th>Prep Work Due 11:59pm</th>
<th>Class Meeting Date and Topic</th>
<th>Wrap Up Due 11:59pm</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>1/22: Course Introduction</td>
<td>1/26</td>
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<tr>
<td>2</td>
<td>1/29</td>
<td>1/30: Quality Control and Reliability</td>
<td>2/2</td>
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<td>3</td>
<td>2/5</td>
<td>2/6: Cells</td>
<td>2/9</td>
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<td>4</td>
<td>2/12</td>
<td>2/13: DNA 1 – Transcription and Translation</td>
<td>2/16</td>
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<td>5</td>
<td>2/19</td>
<td>2/20: DNA 2 – DNA Replication and Mitosis</td>
<td>2/23</td>
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<td>6</td>
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<td>2/27: Exam 1</td>
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<td>7</td>
<td>3/5</td>
<td>3/6: Genetics 1 – Meiosis and Basic Inheritance</td>
<td>3/9</td>
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<td>8</td>
<td>3/12</td>
<td>3/13: Genetics 2 – Inheritance</td>
<td>3/16</td>
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<td>9</td>
<td>3/19</td>
<td>3/20: Physiology 1 – Nutrition and Digestion</td>
<td>3/23</td>
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<td>11</td>
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<td>4/10: Exam 2</td>
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<td>4/16</td>
<td>4/17: Evolution</td>
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<td>13</td>
<td>4/23</td>
<td>4/24: Speciation and Biodiversity</td>
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<td>14</td>
<td>4/30</td>
<td>5/1: Ecology 1 – Populations, Communities, and Ecosystems</td>
<td>5/4</td>
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<tr>
<td>Finals</td>
<td>Thursday 5/17</td>
<td>Final Exam: 12:00-1:50pm</td>
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