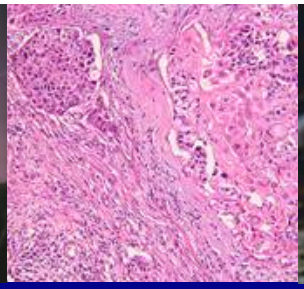
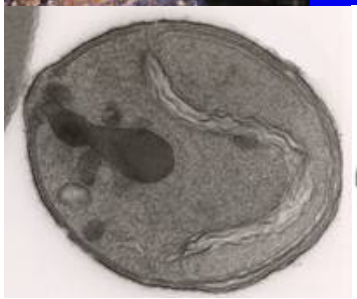









General Biology for Majors I

BIO 181

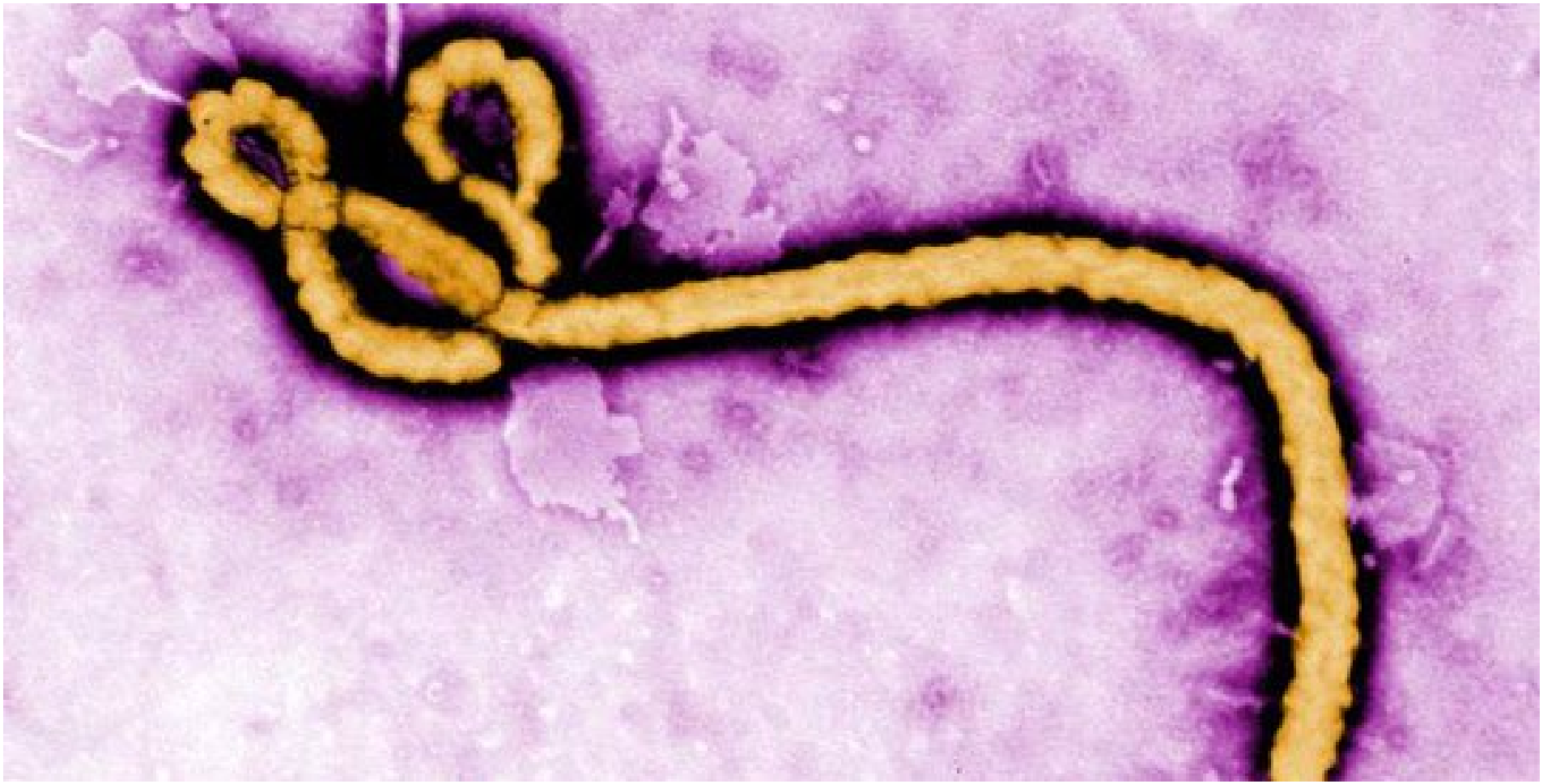
Scottsdale Community College

Dr. Carrie Anderson

The journey starts here

Patient with hemorrhagic fever in a Ugandan hospital

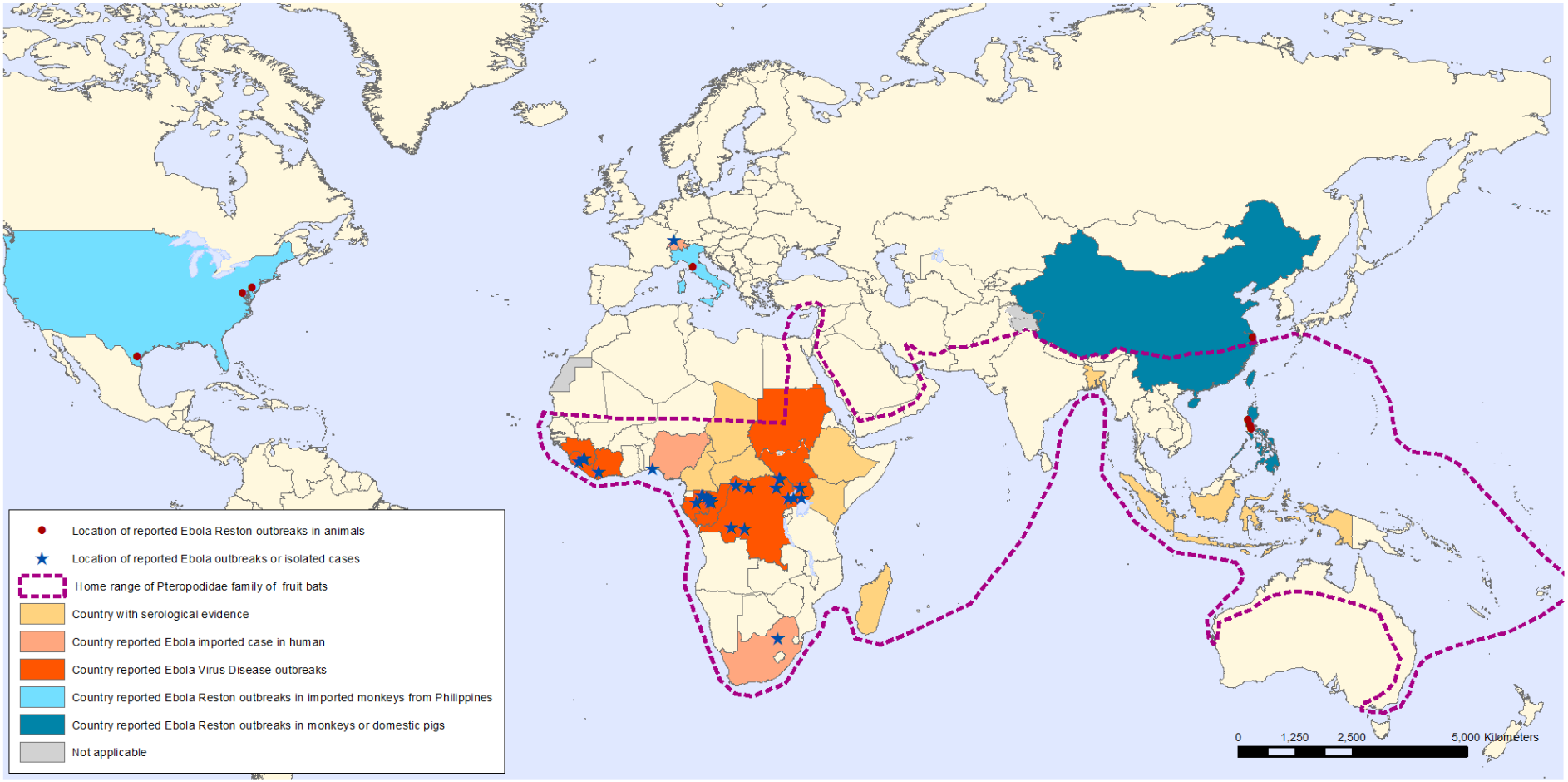
Cause of this case of hemorrhagic fever



Ebola virus

Distribution of the ebola outbreaks

Geographic distribution of Ebola virus disease outbreaks in humans and animals



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Health Statistics and Information Systems (HSI)
World Health Organization

World Health Organization

Course goals

The primary objective of this course is to prepare you for advanced study in preparation for a profession in biology or medicine; in particular, our goals are to

- master the foundational theories of "skin-in" biology in preparation for advanced study; and
- develop fundamental problem-solving skills required of modern professional biologists.

This course is designed primarily for two groups of students:

1. Students majoring in any biology or program; and
2. Students majoring in any other science (chemistry, physics, geology, etc), engineering or mathematics.

Students not majoring in a science, engineering or math program are strongly encouraged to take a nonmajor's biology course (BIO 100, BIO 105 or BIO 108 for example).

Contact information and resources

- Office: NS 135
- Phone: 480-731-8866 x.13513
- Email: carrie.anderson@scottsdalecc.edu
- Office hours: By appointment
- Website: Canvas

Monday	Tuesday	Wednesday	Thursday	Friday
	By app't		By app't	

- Textbook: Freeman *et al.* (2017): *Biological Science* (6^{th} ed.) Benjamin Cummings, San Francisco
- Calculator (required): Any scientific calculator (TI-83 or equivalent recommended; graphing ability not required)
- Website: https://learn.maricopa.edu/

Definitive material for the course is delivered in lecture and lab; the website may not present all relevant material.

Lecture examinations

Number of exams	:	3
Value	:	100 points each, lowest dropped
Dates	:	See syllabus
Format	:	Multiple choice, problems, short answer
Material covered	:	Current unit only

There are no make-up examinations under any circumstances.

If a student misses an exam for a college-sanctioned, excused reason, that student's grade will be based on the remaining exams. If a student misses an exam for an unexcused reason or misses both exams for any reasons, that student will be assigned a failing grade and/or withdrawn from the course.

Students must abide by all exam rules as laid out by the exam cover sheet and/or proctors. Failure to do so results in 0 points for the exam and potential dismissal from the class and college.

Final examination

Value	:	200 points
Date	:	See syllabus
Time	:	See syllabus
Format	:	Multiple choice, problems, essay
Material covered	:	Any lecture or lab material

- All students must take the final.
- The final exam is comprehensive.
- Students who miss the final with a documented, excused absence **approved by the instructor** receive a course grade of "incomplete" and must take the final as soon as possible.
- Students who miss the final for an unexcused reason fail the course. Work, other classes or exams and vacation are not valid reasons to mss the final exam.

Research report

- Students present a research report summarizing a primary research article in the last lab period.
- Reports are worth 70 points.
- There is an additional research component worth 30 points.
- Therefore, this assignment is worth 100 points total.
- Additional details will be provided in lab.

Laboratory

Laboratory work is an essential, integrated part of BIO 181. A single course grade is assigned based on mastery of material in both lab and lecture combined. Therefore, laboratory attendance is manditory.

- Laboratory absences are defined as follows:
  - A student misses a lab = 1 absence;
  - A student arrives late or leaves early = 1/2 absence.
- Every unexcused lab absence > 1 causes the student to drop one letter for their overall course grade.
- Two half absences = 1 full absence
- A student that misses > 3 labs, regardless of the reason, will either fail or be withdrawn from the course.
- The laboratory contributes 37.5% of the total points to the final grades.
- Labs are not designed to increase the overall grade; they are designed to help you acquire critical skills.

Grade summary

Three lecture exams	:	200 points
Final examination	:	200 points
Research report	:	100 points
Laboratory	:	300 points
Total	:	800 points

Grading scale:

Points earned	% of total	Raw Grade
720–800	90–100	A
624–719	78–89	B
544–623	68–77	C
440–543	55–67	D
< 440	< 55	F

+ adjustment for lab attendance

Strategies for success

- Recognize and accept the challenge
- Study consistently outside class (at least 2 hours for every hour of class)
- Take notes; develop an effective note-taking strategy
- Start assignments early; finish them before the deadline
- Read assignments and labs before coming to class
- Use note-cards or similar technique to learn vocabulary
- Form study groups and meet at least once per week
- Engage the course; arrive on time and stay active the entire class
- Use all resources available—website, tutor center, office hours, library, etc.