

# BILD 1: THE CELL (SP23)

**Dr. Gentry N. Patrick**

**Lectures:** Tu/Thu 8am – 9:20am, Center 101

**Office Hours:** Monday 10am-11:30am 1212A Pacific Hall

**Optional:** Textbook *Campbell Biology* (8th, 9th, 10th, or 11th editions).

**E-mail:** gpatrick@ucsd.edu (must include **BILD1** in the subject line and if the matter requires immediate attention include **URGENT** in the subject line as well).

| DATE  | LECTURE | TOPIC  | READING                    |
|-------|---------|--|----------------------------|
| 4/04  | Tue 1   | Introduction / Small Molecules / Bonds                 | Chapters 2-3               |
| 4/06* | Thu 2   | Small Molecules / Macromolecules                       | Chapters 2-5               |
| 4/11  | Tue 3   | Macromolecules   | Chapter 5                  |
| 4/13  | Thu 4   | Bioenergetics / Enzymes                                | Chapters 8                 |
| 4/18* | Tue 5   | Enzymes / Metabolism                                   | Chapters 8-9               |
| 4/20  | Thu 6   | Metabolism   | Chapter 9                  |
| 4/25  | Tue 7   | Photosynthesis   | Chapter 10                 |
| 4/27  | Thu     | <b>MIDTERM EXAM 1 (Lectures 1-7)</b>                   |                            |
| 5/02  | Tue 8   | Organization of the Cell                               | Chapter 6                  |
| 5/04* | Thu 9   | Membrane Structure & Function                          | Chapters 6-7               |
| 5/09  | Tue 10  | Cell Signaling   | Chapters 11                |
| 5/11* | Thu 11  | Cell Cycle/Cancer/Mitosis                              | Chapters 12 + concept 18.5 |
| 5/16  | Tue 12  | Mitosis/Meiosis  | Chapters 12-13             |
| 5/18  | Thu     | <b>MIDTERM EXAM II (Lectures 8-12)</b>                 |                            |
| 5/23* | Tue 13  | Genetics   | Chapter 14                 |
| 5/25  | Thu 14  | Genetics   | Chapter 15                 |
| 5/30  | Tue 15  | DNA / DNA Replication                                  | Chapter 16 + concept 19.2  |
| 6/01* | Thu 16  | DNA Replication / RNA / Transcription                  | Chapters 16-27             |
| 6/06  | Tue 17  | Transcription and Translation                          | Chapters 17                |
| 6/08  | Thu 18  | Genes & Gene Regulation                                | Chapters 18                |
| 6/15  | Thu     | <b>FINAL EXAM (Comprehensive)<br/>8:00am – 11:00am</b> |                            |

\*New materials available for download on Canvas

**Review Session Dates:** Tuesdays 4/25 and 5/16; 6-8pm (Midterms 1 and 2 Review, respectively) and Sunday 6/06 11am to 2pm (Final Review) Location TBA

**NOTE:** Any changes to the syllabus/schedule will be made thru announcements (notified on your UCSD email) and posted on Canvas.

University of California, San Diego  
Consent to Act as a Research Subject

Assessing the Impact of the Acing Chemistry in Biology Education (AChiBE) Program

***Who is conducting the study, why you have been asked to participate, how you were selected, and what is the approximate number of participants in the study?***

Melinda T. Owens and Claire Meaders and their research associates are conducting a research study to find out more about how the Acing Chemistry in Biology Education (AChiBE) program affects student learning and experience in the classroom. You have been asked to participate in this study because you are a student in a class that is being studied or used as a control. There will be approximately 2000 participants in this study.

***Why is this study being done?***

The purpose of this study is to create knowledge that has the potential to improve the learning and educational experience of introductory biology students at UC San Diego and beyond.

***What will happen to you in this study and which procedures are standard of care and which are experimental?***

If you agree to be in this study, the following will happen:

- Your data from this class including grades, homework and exam submissions, and survey responses will be included in the analysis to determine the effectiveness of the AChiBE program used in this course compared to other similar courses.

***How much time will each study procedure take, what is your total time commitment, and how long will the study last?***

Your participation involves only agreeing to let us use your data in our analysis. It will require no time on your part above the time you put into this course without agreeing to the study.

***What risks are associated with this study?***

Participation in this study may involve some added risks or discomforts. These include the following:

1. A potential for the loss of confidentiality. We will not share your personally identifying data with people outside our research team. Data will only be kept in anonymized form for research purposes. Course data will be rendered confidential by removing any identifiers before analysis. Your instructor will never know whether or not you are participating in this study. Data from students who opt out of the study will be removed prior to data analysis by a person on the research team who is not your instructor. Research records will be kept confidential to the extent allowed by law. Research records may be reviewed by the UCSD Institutional Review Board.

Since this is an investigational study, there may be some unknown risks that are currently unforeseeable. You will be informed of any significant new findings.

***What are the alternatives to participating in this study?***

The alternatives to participation in this study are not to participate. If you choose to opt-out of participating in this research study, we will exclude your data from analysis. Whether you participate will have no impact on your experience or grade in the associated class as the professor will not know who is or is not participating in the study.

***What benefits can be reasonably expected?***

There is no direct benefit to you for participating in the study. The investigator, however, may learn more about how to improve student learning, and society may benefit from this knowledge.

***Can you choose to not participate or withdraw from the study without penalty or loss of benefits?***

Participation in research is entirely voluntary. You may refuse to participate or withdraw or refuse to answer specific questions on a questionnaire at any time without penalty or loss of benefits to which you are entitled, like grades. If you decide that you no longer wish to continue in this study at any time, simply respond to the online opt-out form here: <https://forms.gle/fkewm31xa4twQTXk8>

You will be told if any important new information is found during the course of this study that may affect your wanting to continue.

***Can you be withdrawn from the study without your consent?***

The PI may remove you from the study without your consent if the PI feels it is in the best interest of the study, for example if there is incomplete data or plagiarized responses. You may also be withdrawn from the study if you do not follow the instructions given you by the study personnel.

***Will you be compensated for participating in this study?***

You will not be compensated for participating in this study.

***Are there any costs associated with participating in this study?***

There will be no cost to you for participating in this study.

***Who can you call if you have questions?***

Melinda Owens, Claire Meaders, or one of their associates has explained this study to you and answered your questions. If you have other questions or research-related problems, you may reach Melinda Owens at [mtowens@ucsd.edu](mailto:mtowens@ucsd.edu) or (415) 290-8853.

You may call the Human Research Protections Program Office at 858-246-HRPP (858-246-4777) to inquire about your rights as a research subject or to report research-related problems.

***Your Consent***

If you consent to participate in this study, no action is needed. If you **do not** consent to participate in this study, or you choose to opt-out at any time during the quarter, please submit this form online at [link to course-specific opt-out form]. Your instructor will not have access to the list of students who opted out.