

The background of the slide features a complex, three-dimensional molecular structure. It consists of numerous dark grey spheres of varying sizes, connected by thin, light grey lines representing chemical bonds. The structure is dense and intricate, filling the entire frame. The overall color palette is a muted, dark grey-blue, giving it a scientific and sophisticated appearance.

HORMONES & BEHAVIOR

Dr. Kris Sabbi | HEB 1310 : Hormones and Behavior | Spring 2024



COURSE INTRODUCTION

Dr. Kris Sabbi | HEB 1310 : Hormones and Behavior | Spring 2024

OUTLINE

- Some introductions
- Course Objectives
- Topics (and warnings)
- Some details about structure
- Rules of engagement (and grading)
- Tips for nailing this course

BEHAVIORAL ENDOCRINOLOGY

What is behavioral
endocrinology?



BEHAVIORAL ENDOCRINOLOGY

“...the scientific study of the interaction between hormones and behavior. This interaction is bidirectional: hormones can affect behavior, and behavior can feedback to influence hormone concentrations...”

–Nelson, 2010



BEHAVIORAL ENDOCRINOLOGY

“...Hormones are chemical messengers released from endocrine glands that influence the nervous system to regulate the physiology and behavior of individuals.”

-Nelson, 2010



BEHAVIORAL ENDOCRINOLOGY

These processes are both
mechanistic and evolutionary,
immediate and delayed,
ephemeral and epi-genetic.



BEHAVIORAL ENDOCRINOLOGY

The major goals of this class are to build knowledge and know how for understanding how endocrine mediators and modulators effect physiology and behavior ---

--- and vice versa.



BEHAVIORAL ENDOCRINOLOGY

What brings you here?

- Name, pronouns, concentration
- Something that piqued your interest in this topic
- Something you do for fun
- Introduce your neighbor!



Who am I?

Dr. Kris Sabbi

she/her/Dr.

College Fellow

Human Evolutionary Biology

ksabbi@fas.harvard.edu

(or use Course Messages in Canvas)

Office: 50C (Pan Lab)

Office Hours: Thurs. 10:30 – 12:00



Who am I?

Dr. Kris Sabbi

she/her/Dr.



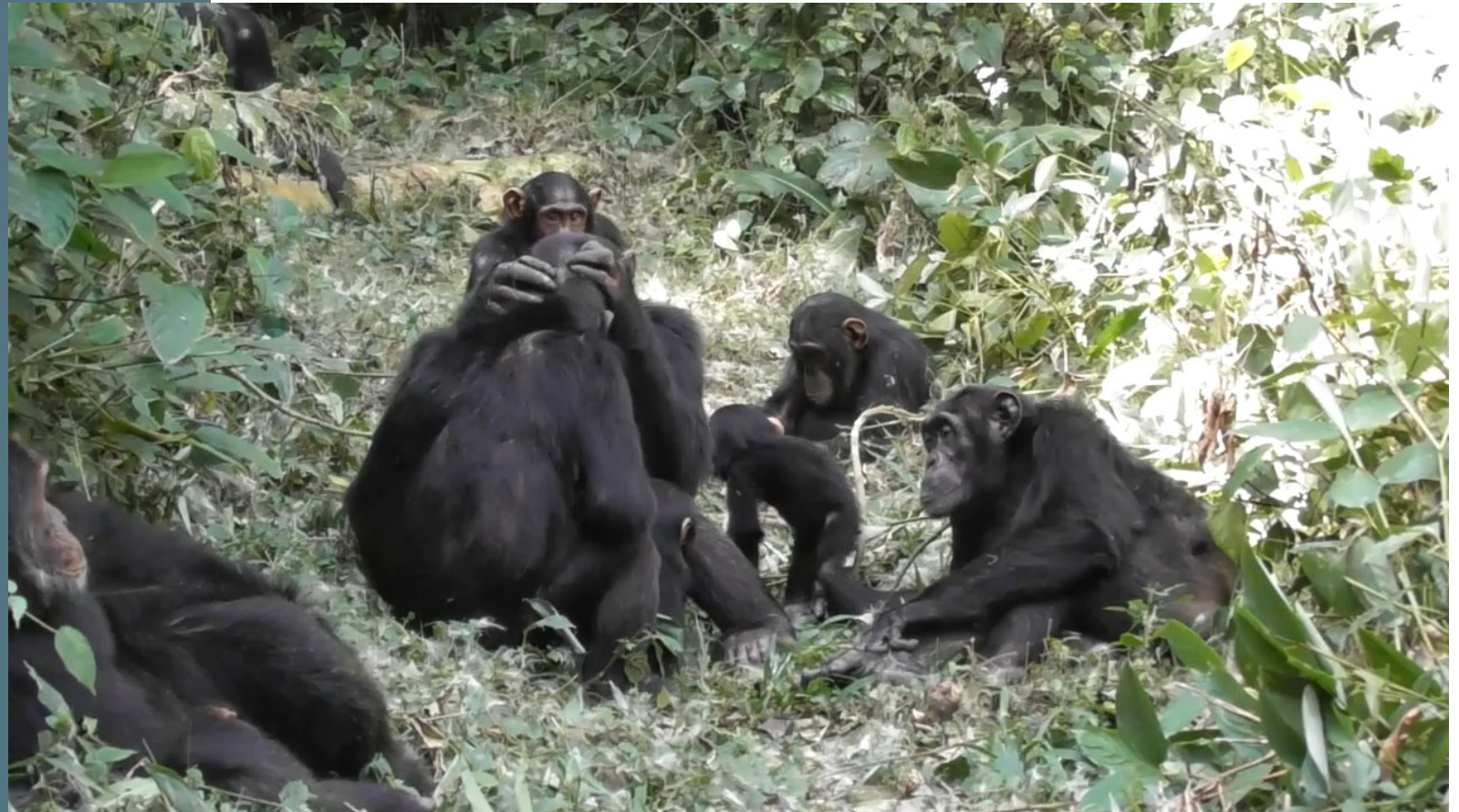
Who am I?



Dr. Kris Sabbi

she/her/Dr.

Ask me anything.



COURSE OVERVIEW

COURSE OVERVIEW

GOALS

1

Gain knowledge of human biology including basic components of the endocrine system

2

Understand experimental procedures and measurements used by behavioral endocrinologists across multiple fields

3

Apply evolutionary theoretical frameworks to explain the complex interactions between underlying biological mechanisms and behavior

4

Interpret and communicate primary literature

5

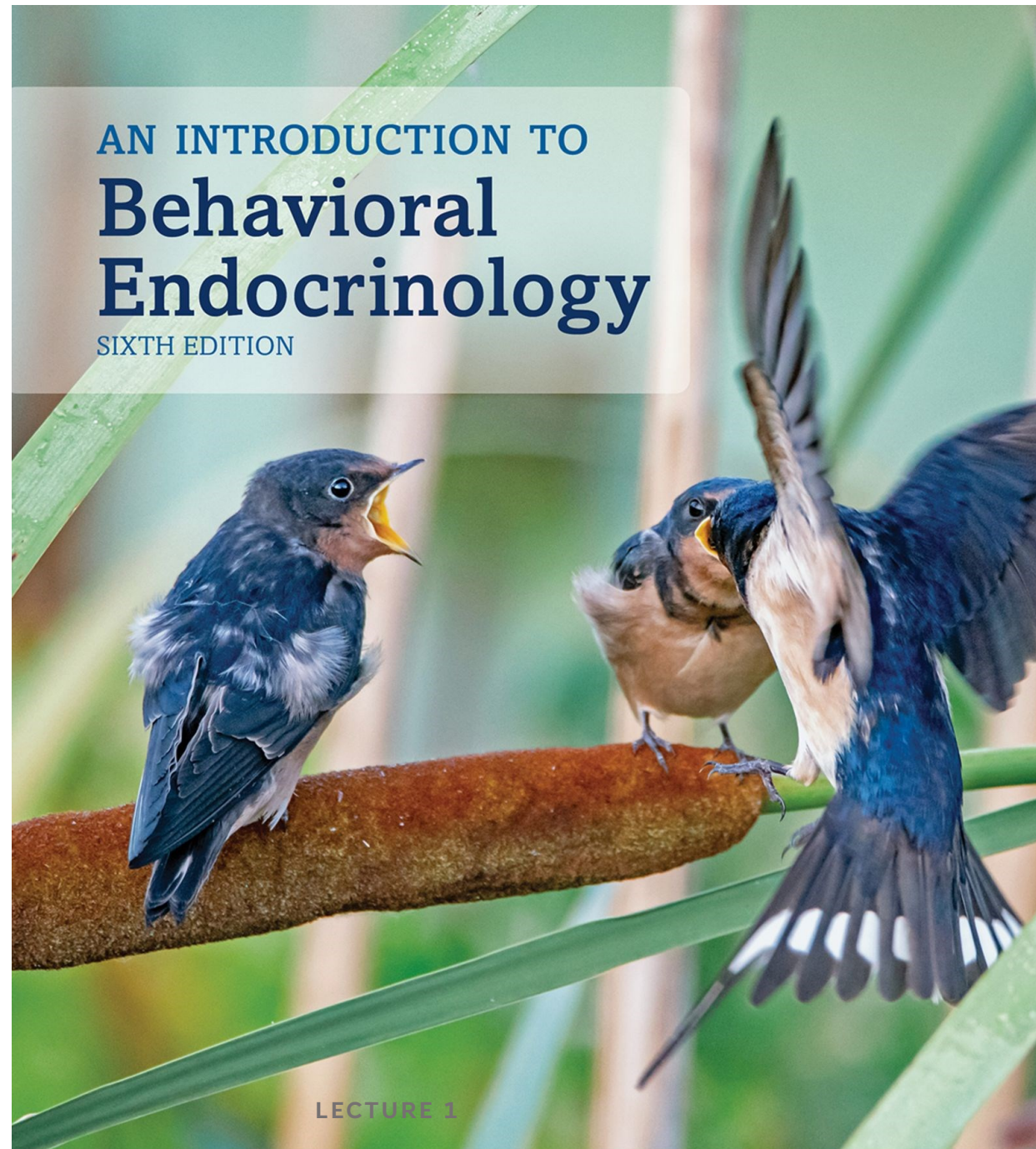
Evaluate evidence and conclusions from published studies

COURSE OVERVIEW

MAIN TEXT

Nelson, R.J. & Kriegsfeld, L.J.
(2022). Introduction to
Behavioral Endocrinology. 6th
Edition. Massachusetts, Sinauer

ADDITIONAL READINGS POSTED TO CANVAS



COURSE STRUCTURE



LECTURES

Tuesdays

To accompany readings from your textbook including additional examples



DISCUSSION

Thursdays

Of primary literature will be led by several students each week, though everyone will be responsible for reading and brainstorming discussion questions



GUEST LECTURES

Intermittent

Highlighting researchers in behavioural endocrinology, especially those early in their careers

COURSE STRUCTURE

FLEXIBLE, MIGHT CHANGE



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COURSE OVERVIEW

GRADING

Late assignments will incur penalties *

Opportunities for extra credit will pop-up as needed and can count for up to 5% of your grade

You can always pop into office hours (Th. 10:30-12:00 or by appointment) to discuss grading issues

15%

Unscheduled quizzes (cannot be made up*, but I will drop your lowest score)

20%

Reading summaries and questions (due 11:59 pm the night before our discussion class)

20%

Participating in course discussions

15%

Leading course discussion session/s

35%

Final Project (15% toward progress checkpoints, 20% toward final form)

COURSE OVERVIEW

FINAL PROJECT

Choose any topic/question that is relevant to the course and review the literature to address your topic. Then communicate your findings.

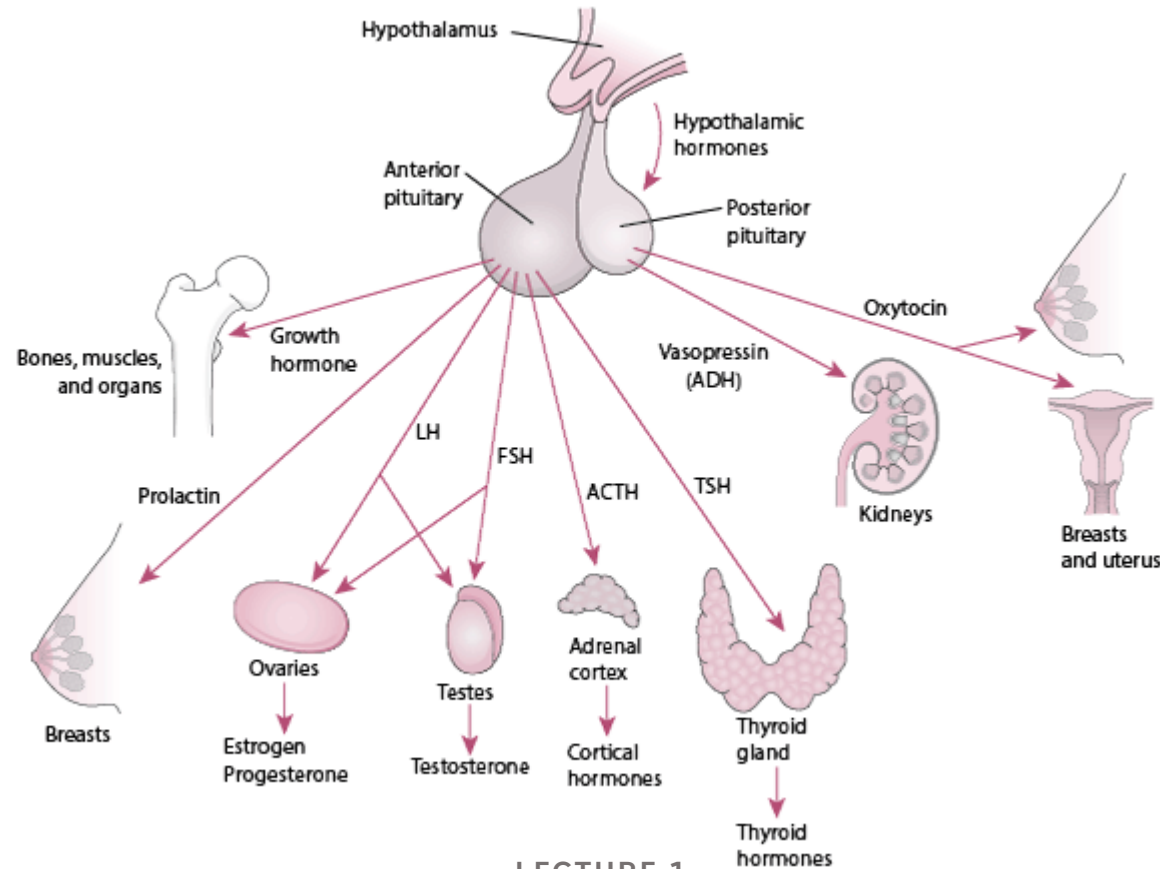
- Final format is open to your choice (later in the course we'll discuss potential ideas)
- However, you must propose a plan for approval in Week 6
- Regardless of format, the requirements for all other aspects of the project will be the same

MAJOR THEMES



BASIC HUMAN BIOLOGY

Broad strokes of
hormonal axes,
organs, and products



**HOWEVER – this
is *not* anatomy
and physiology**

MAJOR THEMES



BASIC HUMAN BIOLOGY

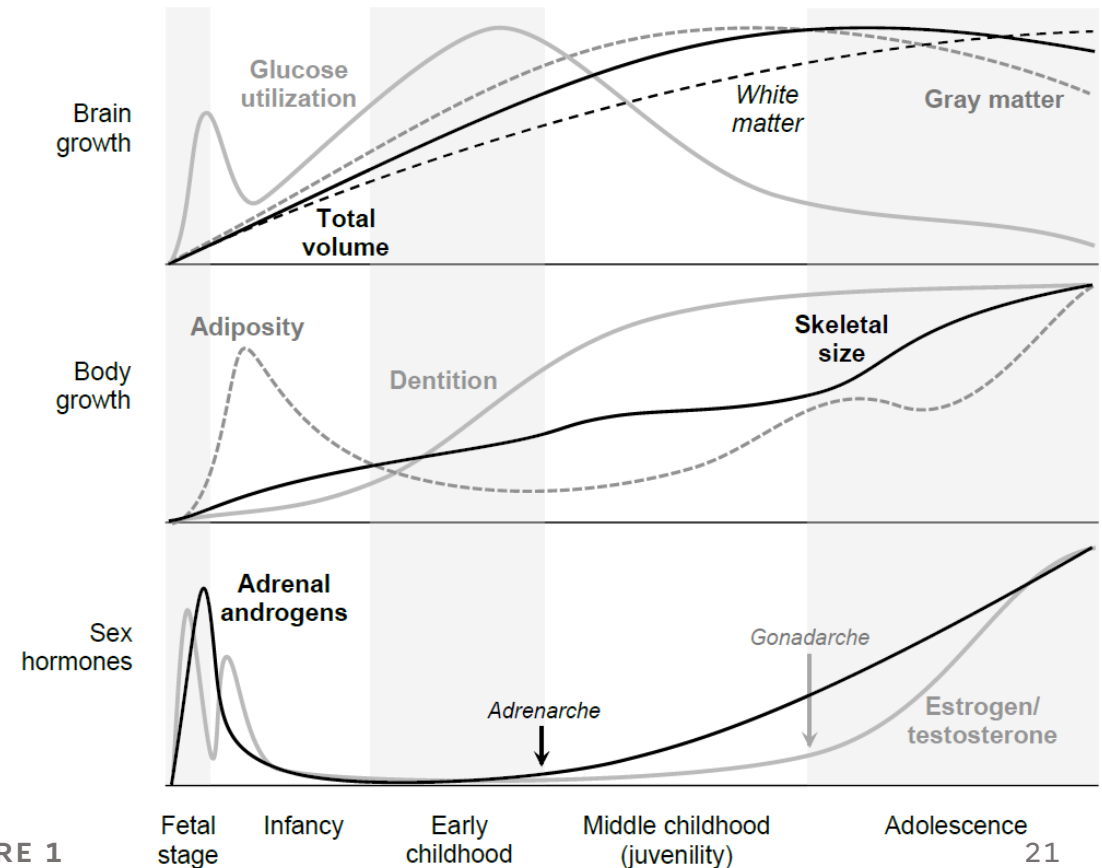
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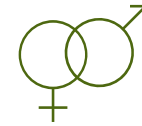


DEVELOPMENTAL PROCESSES

How do hormones help to shape our bodies, brains, and behavior from before we're born until we reach maturity?



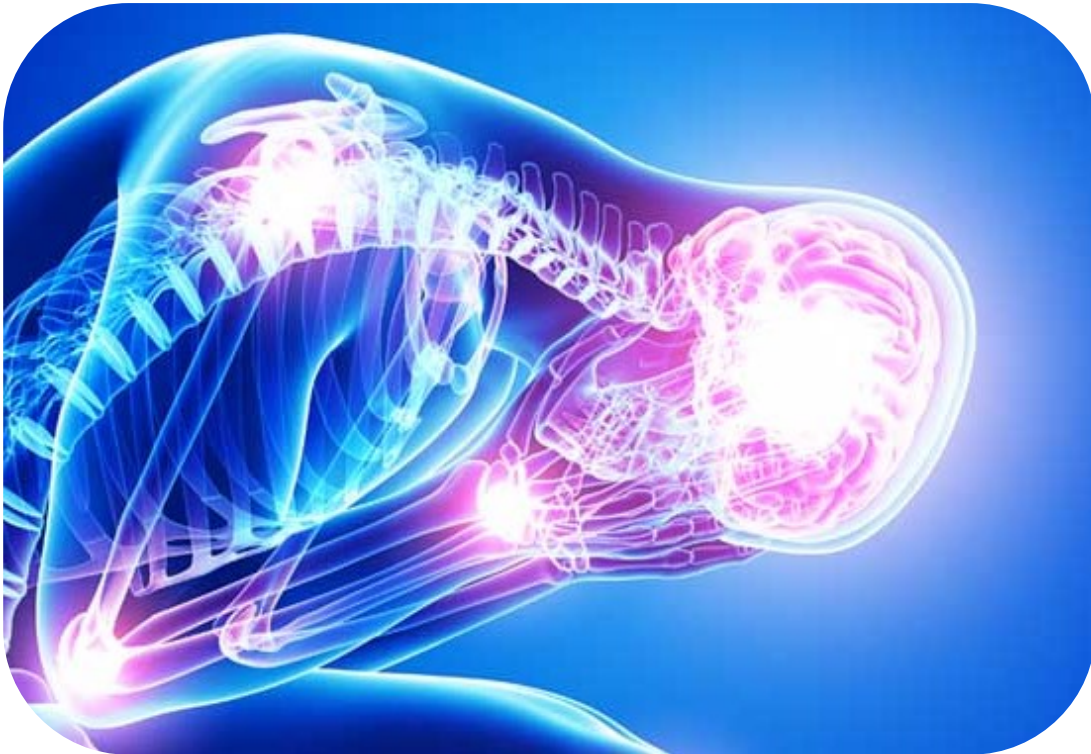
MAJOR THEMES



SEX & GENDER DIFFERENCES

Hormones are intertwined with our chromosomal sex and sex organs, but what about our gender?

MAJOR THEMES



STRESS PHYSIOLOGY

Stress is ubiquitous in our lives, but what does it mean? How do we manage stress and how does that management change with age?

MAJOR THEMES

EVOLUTIONARY PROCESSES



BASIC HUMAN BIOLOGY

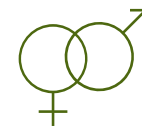
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MAJOR THEMES

EVOLUTIONARY PROCESSES

**WHAT ARE YOU
MOST EXCITED TO
LEARN ABOUT?**

**WHAT DO YOU
ALREADY KNOW?**



RULES OF ENGAGEMENT

RESPECT ONE ANOTHER

This course will include topics that are controversial, “hot,” and/or politically charged. Our job is to wade through any rhetoric, address biases, and assess the evidence. When we discuss course readings, ideas, and topics amongst ourselves in this classroom, we must do so respectfully.



RULES OF ENGAGEMENT

RESPECT ONE ANOTHER

What are some ground rules that are important for maintaining respectful & productive discussions during this course?



RULES OF ENGAGEMENT

RESPECT ONE ANOTHER

Listen actively, without interrupting

Choose your words carefully,
avoiding blame or speculation

Criticize ideas, not people

Consciously consider other
viewpoints --- the goal is to learn,
not to debate

Do not ask any person to speak for
any group of people

PATHWAY TO SUCCESS

1

Abide by our collaborative guidelines to support free exchange of ideas during discussion

2

Keep up with the readings and prepare your summaries and questions

3

Remember that there are lots of pathways toward the grade that you want in this course

4

Have fun with the final assignment, follow your interests and be as creative as you'd like to be

BEHAVIORAL ENDOCRINOLOGY

This course will not be easy,
but it will be engaging, and
you will gain important
skills and knowledge



BEHAVIORAL ENDOCRINOLOGY

On Thursday ---

- Lecture including materials from Ch. 1 (posted on Canvas)

