

How to Succeed in Genetics (BIO325) Dr. Janice Fischer, Molecular Biosciences

Genetics (BIO325) is different from any of your previous biology courses. One reason is that it's an upper division class. Success in BIO325 requires you to:

- take what you learned in intro bio to the next level.
- think analytically, logically, and quantitatively.
- apply your knowledge through problem-solving with a pencil and paper.
- learn a new language.
- STOP MEMORIZING – instead THINK like a scientist.
- be a self-motivated learner.
- learn by helping your peers.
- manage your time well – you're going to need to spend A LOT of time with this class.
- read – a lot.

The official BIO325 curriculum document is here:

https://cns.utexas.edu/images/CNS/BIO_325_Updated_6.22.2020.pdf

Skills you'll need to have before taking BIO325:

- Be confident with basic arithmetic, and particularly the manipulation of ratios, percentages, and fractions.
- Be familiar with basic ideas about probability.
- Be able to read for comprehension.

Knowledge you'll need (at an introductory biology level):

- Genes are in cells.
- Genes are DNA.
- Gene products are RNAs or proteins.
- Genes are expressed: transcription, RNA processing, translation, protein modification
- Genes have particular structures.
- Genes are regulated (they are used in different ways in different types of cells).
- Genes are on chromosomes.
- Genes on chromosomes are replicated and move in specific ways during mitosis and meiosis.
- Genes have different alleles.
- Genes evolve: All organisms have similar genes.

TIPS for Success:

Before taking this course:

- If you think you lack any of the skills or knowledge listed above, fix that before you take Genetics. The Khan Academy online is one place to go for help with arithmetic skills and biology knowledge. The biology knowledge can be found also in your intro bio textbook.
- Don't load up your schedule with other hard courses during the semester you take BIO325.

While taking this course:

- Read before going to class, show up to every class, and participate – ask questions.
- You'll know if you're going about this class properly, because if you are, you'll have questions constantly.
- Go to Discussion sessions every week to get your questions answered.
- Go to Office Hours every week to get to know your Professor so that you feel comfortable asking them questions.