In Biology 324 Genetics during spring semester 2020, I was able to acquire new ways of thinking as well as developing a better understanding of genetics through multiple assignments and assessments. I have been able to look at case studies among other things that have allowed me to gain a greater understanding of many principles of genetics. I think I have learned about how I study best during this course, especially because most the concepts were not that easy to grasp to me. Reading the book and actually taking outlined notes along with the lectures was extremely beneficial for me to learn terminology and concepts. The layout of this class was right up my alley, and I felt like I was always able to earn a good grade.

Case studies have been the greatest help to me this semester. I knew before starting this course that I learn far better when I have examples of whatever I am trying to learn. For whatever reason, it is easier to recall on assessments. I like being able to see exactly how a concept relates to Case studies are the perfect way for me to relate whatever I am learning to a real-life example.

The first case study was on has taught me in depth how inheritance of genes occurs. This study examined a situation in which a family wanted to know the sex of the baby that the mother was expecting. The family claimed that it was because the mother’s uncle had hemophilia, a genetic disorder that hinders the clotting process. The doctor, Dr Johnson, suspects that they will terminate the pregnancy if it is another girl as the couple is not forward. The whole idea of this assignment was to practice using pedigrees to determine which individuals will be affected, and also to discuss the ethical concerns of this test. I was able to apply my knowledge of using pedigrees to draw out an entire one back to before the uncle in order to determine that the child had a 50 percent chance of having this genetic disorder, as a female or a male.

Additionally, I was able to address some ethical concerns that I had not thought about before. I really enjoyed this exercise because I had to really take a step back and determine how I was going to go about solving this question. I think that discussing it in class was also helpful, even though I was a little shy to speak. I have been working on asking questions and being more vocal in class in order to get the most out of it. I think that these skills will allow me to continue to gain a strong understanding in whatever coursework I may take. I still have I have the goal of becoming a veterinarian, and by shadowing I have been able to relate different things to cases and patients. For example, learning about how certain dog breeds are genetically disposed to certain disorders or diseases would be immensely helpful in the future. I think that also being able to learn material right out of the book and be ready to discuss it will also be helpful. My note taking capabilities have definitely improved and will continue to improve as I continue to pursue my career as a veterinarian.

I feel like I was able to make great progress through the learning goals provided. For learning goal one, every chapter had a quiz that went along with it that allowed me to test the knowledge that I had been taught and read about the week prior. These helped me understand what was most important from the chapter. We had practice problems that allowed me to figure out learning goal two, where I could work through pedigrees and figure out what I was missing conceptually. For goal two and three, the practice problems that were recommended from the book allowed me to work on my probability calculations because they were difficult for me at first. For goal 4, I was able to practice assortment and linkage by once again using the recommended practice problems. I really liked being able to work on them and check them either through the step by step in the book or at the end of the book. For goal 6, learning about gene expression was all online so I really needed to practice this concept. The problems in the book and the canvas quiz were very helpful for me. For goal 7, learning about mutations was probably my favorite. I loved learning about how even the slightest mistake in coding could lead to such drastic change, or no change at all. This unit was easier since I have studied mutations before, but I really think that the practice problems always help solidify concepts for me.

Another learning goal that I that I made meaningful progress on would be learning goal number 8. I think I picked this learning goal because although I have seen a couple of these techniques before, I had never really understood how they all really worked. Before every lab we would complete a pre-lab that would allow us to examine the procedure on our own. We would watch a video and copy down the procedure which was extremely helpful for lab. I particularly liked watching the videos beforehand because like I mentioned before I like to visualize things. Sometimes procedures have difficult to understand language when you are not specialized in the field. Being able to watch a video before actually performing a technique was great. For goal 9, as I mentioned before I was able to look at ethics through case study 1. I also was able to identify ethical issues when investigating CRISPR and its use in gene therapy and genome editing. I really liked the lab assignment where we found different research papers and articles that showed what the current projects on CRISPR are and ethical discussions. I had not used a website like that before to compile websites and it was really neat.

I do not think I really failed any of the goals, but the one I struggled with most was definitely understanding goal 5, as there was a lot of vocabulary and small details to remember. I managed to just find time and study. I made flashcards for the vocabulary and watched online videos to try to visualize it better. I like to try and draw out processes like that on my own to make myself remember. On the exam, I messed up some of the terms so in that way I ‘failed’ to make meaningful progress on that goal.

By completing case studies and writing our entire lab report, I feel that my skills as a writer have improved. I think that I am better at peer reviewing as well. I liked how we were able to build up our draft over different waves, I use this skill already for other courses in order to stay on top of my work. By creating a poster and presenting for the online Spring Showcase, I was able to work on communicating effectively. I have really gained an understanding for genetics concepts. I think that this course was one of my favorites this semester because I felt like I could actually master the information being taught. I appreciated how scheduled it was, and that we kept as close as we could to that schedule. I have known that I am a very detail-orientated learner, and that I like having clear cut deadlines. This class had those things and so I was able to excel.

Being able to understand basics of biology and apply them to topics like genetics is extremely helpful. To continue to improve my progress towards the completion of my degree, I will implement the study techniques and learning principles that I developed during this course. For this course I used my textbook way more than any course before and I felt I was very successful. I have known that having the course material in print has been helpful, but I have definitely found a new appreciation for having writing in print. However, I am getting better at only working with online research papers and other lengthy text online. I bring this up because I know that in order to achieve my degree, I will need to be able to work with both online and print resources. This course has helped me with my studying skills, learning skills, lab skills, and I think has helped me grow as a student and a biologist.