11 Important Tips for Success with Hopeman Majors

1. Students need to make academics a priority while at school. Many GCC students become involved in too many extracurricular activities and do not give academics the appropriate priority. Studying is essential for academic success, particularly for courses in physics and engineering. Sometimes difficult choices must be made to give up or postpone desired activities to achieve success in an area such as academics. Freshman should be cautioned about this, particularly at the beginning of the fall semester when they are expected to participate in many nonacademic activities. To quote one faculty member "College is the beginning of a person's career, not merely what they are doing to get ready for their career. People shouldn't waste time when they are doing career-related activities, which really should represent a very larger proportion of one's waking time while in college."

2. Students need to realize that they must spend "quality time" studying and completing assignments. This assumes that students know the expected amount of "out-of-class" time they must put into courses (3 hours outside of class for each hour in class). **Quality time means free from distractions** (people, electronic devices, facebook, etc.).

3. Physics (and engineering) courses require the hard work of thinking in logical and mathematical terms (never simple memorization).

4. Using good problem-solving methods is important for success. Your instructors will provide you with problem-solving procedures appropriate for the class. These procedures are based upon years of research and practice in effective problem solving, and will aid you in developing good analytical problem solving skills. **One of the biggest mistakes students make in introductory physics courses is ignoring the suggested problem solving strategies, choosing instead to rely upon the generally immature, low-level approaches used in their high-school classes.**

5. Development of an ability to learn by oneself is important.

6. Studying in groups is helpful, but should not become a crutch. There is a danger of a student not truly trying to solve a problem individually before seeking help from the group, just to complete an assignment.

7. Engagement during class is important. Taking good notes does not mean simply writing everything down from the board or the screen - filtering, summarizing, condensing, and elaborating are required. Technology (use of computers) does not replace thinking. In a physics class with drawings and mathematics, writing by hand (paper or possibly tablet PC) is best. I would suggest that students should not use computers just for the sake of using technology.

8. Careful reading of material from texts is **expected and assumed**.

9. Students should seek out help, when needed and **as early as possible**, from their professors, peers, and tutors.

10. Students should not expect to be able to do well on a physics exam by cramming the night before. A recommendation is to review the material weekly. This means that the oldest information has been

reviewed the most and the newest material, which should be fresh in their minds, has been reviewed the least at the time of an exam.

11. Finally, many of the study tips discussed herein have been advocated for a long time. Physics study tips written in 1949 are still applicable today (see link below). There is a summary of 52 points near the end of the document. http://www.lhup.edu/~dsimanek/chapman.htm