

# Syllabus for Conceptual Physics (PHY 101 – Section 101) - Fall 2018

Science Building, Room 277 – (TR: 12:30pm – 1:45pm)

**Course Description:** This is a 3-credit hour, lecture format, introductory physics course for non-science majors. You will study the structure and organization of matter in the universe, the processes of physical and chemical change, and the forms, uses, and conservation of energy. PHY 101 provides “Emphasizes conceptual understanding of basic principles in classical and modern physics.” ~ 2018 - 2019 undergraduate course catalog. You are expected to have a working knowledge of high school algebra and geometry.

**Learning Outcomes:** In the process of learning the fundamentals of physics in this course as described above, **the overarching goal**, independent of your major, is to help hone your critical thinking, analysis, problem solving, and quantitative reasoning skills. You will see the mathematical structure of physics formulas; those formulas will be used to solve the physics problems. In order to accomplish this goal successfully, you will be given **practice** via homework problem sets that will be due weekly. Your individual success in achieving this goal will be **assessed** by your individual performance on 4 in class examinations and 1 in class comprehensive final.

**Lectures:** Ideally, lectures will contain exciting demonstrations where possible that will illustrate the physical concepts being taught and they will also provide you with the background to solve real world problems. Ideally, all the aforementioned topics will be covered. Some topics might have to be omitted due to unexpected and unforeseen circumstances that may arise throughout the semester. A tentative course schedule is found at the end of this syllabus with exam. Dates may change on this tentative course schedule; thus, see the most up to date syllabus on MU Online, which includes an up to date schedule of exams and an up to date list of topics covered, etc.

**Course Instructor Info:** Dr. Sachiko Toda McBride, Science Building 101, (304) 696-5755, [mcbridesa@marshall.edu](mailto:mcbridesa@marshall.edu)  
Office Hours: (M&W 10am-12pm), (Tu 10-11am), & (F 10am-2pm Herd Hours) or by appointment

**Textbooks:** “Conceptual Physics” by Paul G. Hewitt, 12<sup>th</sup> Ed.  
E-Text Version: ISBN-13:978-0-321-93977-7  
Hard Cover Version: ISBN-13: 978-0-321-90910-7

**Clicker:** Clicker – Use your own clicker or one of the clickers in the black box in Room 277.

**Co-requisite Course:** PHY 101L – Conceptual Physics Laboratory

**Pre-request Course:** MTH 121, 127, 130, 130E, 229, 203, 121B, or 130H

|                        |                                     |     |
|------------------------|-------------------------------------|-----|
| <b><u>Grading:</u></b> | Clicker:                            | 7%  |
|                        | Weekly Homework:                    | 27% |
|                        | Final Exam:                         | 18% |
|                        | In Class Exams (4 total, 12% each): | 48% |

|                                              |                 |   |
|----------------------------------------------|-----------------|---|
| <b><u>Determination of Final Grade*:</u></b> | 90% or above:   | A |
|                                              | 80% or above:   | B |
|                                              | 70% or above:   | C |
|                                              | 60% or above:   | D |
|                                              | 59.9% or lower: | F |

*\* I reserve the right to adjust these values based on the overall class performance, thus stay above the average grade of the class to ensure an above average grade in the class. No extra credit assignments will be given and the lowest exam/homework scores will not be dropped.*

**Computer Requirements:** Access to MU Online and a @marshall.edu email are all required. You are expected to check those two frequently. I use MU Online to distribute notes from my lectures, supplementary material, and class performance information; sign in at [www.marshall.edu](http://www.marshall.edu) in the upper right corner using your username and password. I also send notices to your Marshall email account. All electronic course communication must be through your Marshall email account (not gmail, yahoo, etc.).

**Electronic Devices:** All cell phones, headphones, pagers, laptops, I-pads, & other communication devices, etc., should be turned off/silenced and should not be visible during class time or exam time; if out during an exam, you earn a zero for the exam.

**Calculators:** No programmable/graphing calculators are allowed during exams (No TI-83 through TI-Nspire CX for example). Get a simple TI-30 or TI-35 for example (model numbers and brands may vary, but you get the idea). My best advice is to learn how to use your simple calculator early and stick with the same one for the exams and homework. Don't do all the homework with a TI-89 or a TI-Nspire CX and then try to switch to a TI-35 for the exam, this will not go well for you, guaranteed. **Cell Phones are NOT allowed to be out and must be turned off or put in silent mode during exams, therefore, calculator cell phone apps are NOT allowed.**

**Clickers:** In this course, clickers will be used to check your understanding of class materials. The clicker questions makeup 7% of your grade (1 point per question – 0.9 pt. for effort and participation/0.1 pt. for being correct). No make-ups are available for clicker questions. Your three lowest clicker scores will be dropped at the end of semester, which means you can have three absences. Cellphones cannot be used in class and cannot be used with the clicker questions. Pick up a clicker from the black box in room 277 before the lecture starts except exams' days if you do not have your clicker. **You must use the same clicker through the semester and return it before leave the classroom. MAKE SURE YOU GRAB YOUR CORRECT NUMBERD CLICKER (IF IT IS NOT THERE LET ME KNOW AT THE START OF CLASS).** The first two weeks will be a trial run for the clicker questions, everyone gets ALL points for trying, and this is the time to get any issues worked out with clickers. After the first two weeks, you only get points if you show up and successfully submit responses.

**Help for This Course:** If you are starting to experience difficulties in this class, there exist several resources available for you to obtain additional help. Resolve these difficulties quickly, before they snowball out of control.

- I will have **nine office hours per week (four hours for Herd Hours)** or we can make an appointment if these office hours do not work for you. Or, you can simply drop by Science Building 101 at any time, and if I have additional time to help you, I will.
- You are encouraged and welcome to participate in what has been called '**Herd Hours**', a place where students can come individually, or especially in groups, to **the Science Building room 179 from 10:00am-2:00pm on Fridays** and work on homework together in a non-classroom and non-typical-professor-office-hour setting. Simply come by and ask some questions. At '**Herd Hours**', I will always be around to help you at any time if you get stuck, but what I really want to see at '**Herd Hours**' is students helping fellow students, leading each other through peer instruction. Struggling, discussing, conquering the problems, and celebrating with your friends and peers is better than being frustrated by yourself and not making progress on the homework. I encourage you all to work together. When working in groups there are more people around the table with different skill sets and different approaches and ideas to attack the problems. Working together in groups often results in getting the homework done faster with a better understanding and is overall a more memorable experience than spending long frustrated isolated hours struggling on your own.
- Additionally, there are free university tutors available. See current tutoring schedule available at: <http://www.marshall.edu/uc/tutoring-services/>. If you seek an individual tutor, stop by the Communications Building, Room 211 and submit a "Request a Tutor" form (available at: <http://www.marshall.edu/uc/tutoring-services/>). If you have not heard from the tutoring office staff within one week of submitting your form, please call 304-696-6622 or email [tutoring@marshall.edu](mailto:tutoring@marshall.edu).
- **PhET Simulations:** Remember, physics is some hard stuff when seeing it for the first time. I will try to introduce demos into the lecture to help assist in conveying the concepts; however, PhET Simulations are also another good tool to see concepts in action. PhET Simulations are interactive self-contained apps that highlight or demonstrate a physical concept. Outside of class, go online and play with the parameters in these simulations and see how they changes the results. To run the PhET Simulations suggested in your text, use the latest version of Mozilla Firefox as your browser (<https://www.mozilla.org/en-US/firefox/new/>) combined with the latest version of Java and Adobe Flash Player software found at <http://java.com/en/> and <https://get.adobe.com/flashplayer/>, respectively. Then select the simulations listed in the book directly from the web site, <https://phet.colorado.edu/en/simulations/index>. Visit <https://phet.colorado.edu/en/troubleshooting>, if you experience problems or cannot open/run the PhET simulations.

**Physics Is Not Easy:** Physics is a subject where **memorization techniques will NOT work**; this is why it is often perceived as a difficult subject by many. To be successful in this class, understand the individual concepts and how they relate to your favorite example; then be able to apply that concept to many other different problems and situations. The homework is time consuming and challenging, but that is rightfully why it makes up 27% of your grade. Your understanding is proven by your individual exam performance. You must be able to demonstrate/understand the concepts from homework or else you will fail exams and thus the course. If you do any of the homework problems incorrectly, it is your responsibility to learn how to do them correctly, solutions will be posted on MU Online, and I am mostly always available if you need help.

**Required Reading and Purpose of Lectures:** It is required that you read the sections of your textbook that are outlined in the tentative course schedule. You should certainly read the corresponding sections prior to attempting the homework and exams. The lectures are geared toward the average student and primarily meant to (1) spark an interest in the subject, (2) highlight key and often difficult parts of the text, (3) show exciting demonstrations of the concepts discussed in the text where possible and available, and (4) work through some examples to give you the mathematical machinery to solve problems. It is recommended that before or after class you download any additional slides/notes from MU Online and review them before the next class. Study your book, your homework, provided solutions, your lecture notes, your previous exams, and ask questions! :)

**Attendance:** A new MU policy requires or will require keeping attendance records for freshmen; thus, to be fair, all students will be required to sign an attendance sheet for every class period. That being said, I view all university level students as adults who can do adult things such as drive a car, vote, pay taxes, and who can be sentenced to jail as an adult. Thus, as adults, I expect you to be responsible and in class at all scheduled meeting times; however, will not be docked points if you have an emergency and have to miss a normal class when homework is not due and there are no exams for that day. Simply get the missed lecture material from a willing classmate or MU Online. Keep in mind there is a strong correlation between attendance and exam performance. All exams & homework are mandatory and must be taken in class/(turned in) on the provided dates. If you know well in advance you will miss, notify me immediately. Also, notify me immediately when you realize a conflict exists (check the tentative exam schedule at the end of this document for exam times) so we can come up with an alternative plan. All students are responsible for all lecture and demo material that occurs in class. Frequent absentees will be reported to the Dean of the College of Science and the Dean of Student Affairs.

**Emergencies/Unexpectedly Missed an Exam or Unable to Turn in Homework:** Unexpected emergencies & accidents happen. Make email contact with me as soon as possible; you must give your reason for missing the exam and/or assignment in the email. A missed exam, with no prior email & no legitimate supporting documentation before or immediately after an exam, counts as a zero and cannot be made up (same goes for homework). Makeups will be given only in very rare circumstances, which require legitimate documentation and may need approval from the Provost or Sr. VP or Dean of Student Affairs and/or the Dean of the College of Science. The Provost, Sr. VP, or Dean of Student Affairs determines what is defined as an “excused absence”- a qualified event for missing exams/quizzes and unexpectedly not being able to turn in homework on the provided due date. Examples include: extreme personal emergencies (house fires, serious crimes, and grave emergencies), university-sponsored activities, medical circumstances, death or critical illness of an immediate family member, short-term military obligations, jury duty, subpoenas for court appearance, etc. If an exam or homework is missed, and one of the above is the reason, I will need immediate legitimate documentation to verify the event in order to schedule a make-up exam/assignment.

**Homework:** You have to use separate sheets, show all your work, well organized, and make sure your writing is very clear. 7-12 problems per week. Two randomly chosen problems out of the total number of problems will be graded for correctness and a small percentage of points will be given for completing all other problems (Note: I dislike the fact that you don’t get all your homework graded, but it is impossible to grade ~350-600 problems per week). After solutions are posted make sure you did the other problems correctly. Homework is due at the beginning of class on Tuesday each week (if the university is closed on Tuesday due to a holiday or weather, it will be due on Thursday of that same week, or the next scheduled class day the university is open). New problems will be given in return. The purpose of these problems is to make sure you can clearly write out your thought process for someone to follow, showing all the details of your work and how you arrived at your final answer (you need to do this for exams). In general, the best way to receive the most points on your written solution is to explain in words what quantity/variable you are solving for, in words explain how and what principles you are applying to solve for it, and show **ALL** the algebraic steps and logic leading to a final equation that just contains symbols at first, no numbers. Only plug numbers into the final expression. Keep the correct units with all numbers and box your final answer. See also the document “**How to write-up my physics solutions on homework and exams?**” on MU Online to get the most points on your written homework and exams. Solutions to homework will be posted shortly after they are due (if not posted promptly, email me immediately).

For your homework, always try it yourself first; however, you are all encouraged (but not required) to discuss it with your peers for help. Your peers (N~50) significantly outnumber the number of the professors for this course (N = 1) and they may be more available than your professor to help you. I encourage students to discuss homework with each other if you arrive at different answers. If you think the answer you got is correct and you are confident in your solution, try and explain it to your fellow students, see what they think. Maybe they solved the problem a different way, arriving at a different answer, encouraging you to review and rethink how you solved the problem. Hopefully this encourages discussion of physics among you and your fellow students and builds your confidence in problem solving and improves your ability to explain your work to others. If you cannot get the required help from your peers, or simply have a question, come see me during office hours, drop by anytime, or make an appointment with me, and/or apply for a tutor.

Also, keep in mind that acing the homework with a 100%, though homework is a significant portion of your grade (27% of the total grade) this will not be enough to allow you to pass the class if you do poorly on exams; thus, it is not beneficial to copy the homework each week from your peers without understanding it. Independent of whether you work in groups on your homework outside of class or work individually and never collaborate with your fellow classmates, **your performance and your performance alone is the determining factor that will allow you to pass course (exams total 66% of the overall class grade)**. I expect everyone to put the time and effort in on the homework and to do very well on it (this is your grade padding), what will separate out the A, B, C, D, F, and W students will be individual exam performance. It is ill advised to continually ask your peers for help on the homework and then simply copy what they say without understanding the concepts or the detailed math behind the problem; you might get some partial credit on the written homework. If you do not understand the concepts and math, continually ask questions to me or your peers until you understand the concepts and the math, this is how to pass the course.

**Homework Extensions:** If you have to miss class on Tuesday, plan to turn the written homework in earlier, not later (scan and email, if you cannot find a scanner, any pictures of your homework must be large enough to be legible to be graded, don't risk it, find a scanner is the best option). **I do not accept any homework after I post the solutions. Homework extensions are only given in very rare circumstances, requiring documentation and must be a qualifying event (see Emergencies Section regarding excused absences).**

**Exams:** The exams are closed-book, closed-note, and an equation sheet will be provided. All graded materials require the name that matches your course enrollment, no nicknames. There are 4 in-class exams during the semester, plus a final exam (all mandatory). **Any exam conflicts need to be brought to my attention at least 2 weeks before each exam (check the tentative schedule at the end of this document now for all exam dates, if you have known conflicts report them early).** The final exam will be 'cumulative'. That being said, a lot of the discussed topics in the class will rely on the previous learned material, thus it is best to treat **all material in this class as cumulative** in the sense that new material on exams can use concepts from the previous material (for example on the second exam, which focuses on Chapters 4-6, you most certainly will need to remember concepts from exam 1, which covers Chapters 1-3). I want you to do well on the exams, thus I will volunteer myself on the **Wednesday** before each regular exam and the **Sunday, Dec. 9<sup>th</sup>** before the final exam for a non-required review session (6:00-8:00pm, Smith Hall Rm. 531, this is your time to ask questions, not for me to re-lecture; if no one has questions, reviews will be most likely be very short, come with specific or general questions). Exams will typically contain a mix of written problems similar (but not identical) to homework problems, lecture material, and/or lecture demos and there will also be some conceptual problems. The conceptual questions could be a mix of multiple-choice, true & false format, and/or require a small amount of written work/calculations, **the written problems, where indicated, will require you to show ALL your work for full and partial credit.** See the document **"How to write-up my physics solutions on homework and exams?"** on MU Online to get the most points on the written solutions. Class averages, medians, and possibly grade distributions will be presented after each exam to let you know exactly how you are doing relative to the rest of the class.

**The Final Exam:** The final exam for PHY 101 is on Tuesday, Dec. 11<sup>th</sup> between 12:45pm-2:45pm at Science Building 277. Your final **IS** comprehensive, mandatory, and makes up 18% of your final grade in the course. If a final exam conflict exists with the scheduled final exam time, follow the steps outlined on the Marshall University Fall 2018 Exam Schedule available at: <http://www.marshall.edu/registrar/files/Fall-2018-Exam-Schedule.pdf>. If the two-hour time allowance results in a conflict in exam times, it is the student's responsibility to notify the professor of the later course and to reschedule the later exam. Rescheduled exams must be concluded by Friday, December 14<sup>th</sup>, at 6:00 p.m. Depending on the semester, the 1-week rule may not apply for the final exam simply due to lack of time between when you take the final exam and when final grades are due (so if there are questions on final exam grading, ask them during or before the end of final exam week).

**Drop:** Withdrawal period begins August 27<sup>th</sup> and ends for individual course withdrawals October 26<sup>th</sup>.

**Authorized vs Unauthorized Aid in Academic Work:** In this course, you are permitted to talk with other students about your written homework problems and even encouraged to work together in groups on the homework, but you may not copy solutions verbatim from each other or answers verbatim from any other source. You must work the problems out for yourself and understand them. Remember, 66% of your final grade is based on how you, and only you, can answer questions on the individual exams. Copying something and not understanding it does you no good now or later. If you have any questions about what constitutes authorized vs. unauthorized aid, contact me immediately. It is fairly easy to see when the same incorrect solutions are copied directly from the web year after year from unauthorized sources like chegg.com and cramster.com. If caught using such websites or similar ones in any way as indicated in the following University copyright statement, and your usage is traced to you via the IP address on your personal phone, laptop, or device on campus or at a current addresses the university has on file for you, you will receive an F in the course and your actions will be considered as acts of academic dishonesty and treated as such. If you are in doubt of what is an approved source, just ask me.

**Statement for Copyright Notification:** Copyright (2018) - Dr. Sachiko Toda McBride, as to this syllabus and all lecture material. During this course, students are prohibited from selling notes to or being paid for taking notes by any person or commercial firm without the express written permission of the professor teaching this course. **“All materials used in this class (in any form, electronic, printed, or verbal), including, but not limited to, exams, quizzes, handouts, lectures, homework assignments, and all material on the university’s learning management system (currently Blackboard) and its peripherals, are copyright protected works under US Code Title 17. (1) Unauthorized copying, distribution, recording, selling, or posting of any portion of class materials, in any form, in any way, is a violation of federal law; this specifically includes posting any portion of the class materials to the World Wide Web through the Internet, and/or via any other means of electronic communication. (2) Unauthorized sharing of class materials in any form, specifically including, but not limited to, uploading class materials to websites for the purpose of seeking/providing solutions or sharing those materials with current or future students is a violation of the Academic Dishonesty Policy set forth in Marshall University’s Student Code of Conduct. ‘Unauthorized’ means without explicit permission from the instructor. Violation of (1) or (2) will result in all necessary disciplinary actions taken against the student.”** ~ Marshall University Copyright Statement, updated fall 2016.

**The 1-Week Rule:** Any grading dispute or mistake needs to be brought to my attention within one week of when the assignment was distributed or made available to the entire class. After 1-week from this date, regardless if you did not attend class to receive your graded assignment, grades are permanent. Any attempt to alter a previously graded assignment in any way, such as adding information to it, removing information from it, or simply altering the previously presented work for a better grade is considered academic dishonesty and will be treated as such.

**Statement Defining Expectations for Student Conduct:** I will expect everyone in all portions of this class, including, but not limited to lecture, exam times, and office hours to act in a professional and courteous manner. Students are expected to conduct themselves in a manner that creates a productive learning environment for all members of the class. To this end, disruptive, abusive, or offensive behavior directed at anyone involved in the class will not be tolerated, and offenders may be asked to leave the classroom and forfeit any associated grades. Disruptive behavior is any behavior that interferes with the normal conduct of lecture/exams or behavior that inhibits a productive learning environment (this includes sleeping in class and using any electronic device). If you are experiencing, disruptive, abusive, or offensive behavior directed towards you from others in the class (this includes when working together in homework groups outside of class if desired), please make me aware of the problem as soon as possible. In addition to acting professional and courteous in class, I only respond to emails that are written with professionalism and courtesy.

**Statement Regarding Students Requiring Special Accommodations & Students with Disabilities:** If you have any condition (physical, learning, or psychological) which will require any sort of special accommodations of any kind, such as testing accommodations, as soon as possible, please notify me immediately and contact the Office of Disability Services Program ([www.marshall.edu/disability](http://www.marshall.edu/disability)) or call 304-696-2467 to register and complete required documentation. Unfortunately, before accommodations can be given, I must receive official documentation; therefore, take care of this the first week of classes.

**University Policies:** By having the privilege of being enrolled in higher education and this course, you agree to all the University Policies and codes listed below. It is the student’s responsibility to read the full text of each policy and code by going to [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on “Marshall University Policies” or, you can access the policies directly by going to [www.marshall.edu/academic-affairs/policies/](http://www.marshall.edu/academic-affairs/policies/). The individual policies and codes are: Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Dismal/Academic Forgiveness/Academic Probation and Suspension/Affirmative Action/Sexual Harassment/Code of Student Rights and Responsibilities - also referred to as the Student Code of Conduct ([http://www.marshall.edu/student-conduct/files/2300\\_Student\\_Conduct.pdf](http://www.marshall.edu/student-conduct/files/2300_Student_Conduct.pdf)).

| W #                                                         | Day | L # | Date          | PHYS 101 - Subjects                                   | Chapter - (Sections)<br>Required Reading | PHYS 101L Lab<br>for the week                         |
|-------------------------------------------------------------|-----|-----|---------------|-------------------------------------------------------|------------------------------------------|-------------------------------------------------------|
| 1                                                           | Tu  | 1   | August, 21    | Introduction, Units                                   | Appendix A                               | No Lab                                                |
|                                                             | R   | 2   | August, 23    | Velocity, Speed, Acceleration                         | Ch.3-(1-4), Appendix C                   |                                                       |
| 2                                                           | Tu  | 3   | August, 28    | Constant Acceleration, Free Fall                      | Appendix B, Ch.3-(5)                     | Lab 1: Velocity &<br>Acceleration<br>[Inclined Plane] |
|                                                             | R   | 4   | August, 30    | Projectile Motion                                     | Ch.10-(1-2)                              |                                                       |
| 3                                                           | Tu  | 5   | September, 4  | Newton's First and Second Laws                        | Ch.2-(3-4), Ch.4-(1-4)                   | Lab 2:<br>Measurement of<br>"g" [Free Fall]           |
|                                                             | R   | 6   | September, 6  | Newton's Third Law, Applications of Newton's Laws     | Ch.4-(5-6), Ch.5-(1-4)                   |                                                       |
| 4                                                           | Tu  | 7   | September, 11 | Impulse, Momentum, Collisions                         | Ch.6-(1-6)                               | Lab 3: Conservation<br>of Momentum                    |
|                                                             | R   | -   | September, 13 | Exam 1 (Appendix A-C, Ch. 3, 10)                      |                                          |                                                       |
| 5                                                           | Tu  | 8   | September, 18 | Work, Power, Machines                                 | Ch.7-(1-2, 7)                            | Lab 4: Simple<br>Harmonic Motion<br>[Simple Pendulum] |
|                                                             | R   | 9   | September, 20 | Potential Energy, Kinetic Energy                      | Ch.7-(3-4)                               |                                                       |
| 6                                                           | Tu  | 10  | September, 25 | Conservation of Energy                                | Ch.7-(5)                                 | Lab 5: Hooke's Law                                    |
|                                                             | R   | 11  | September, 27 | Vibrations, Waves                                     | Ch.19-(1-5)                              |                                                       |
| 7                                                           | Tu  | 12  | October, 2    | Sound Waves, Musical Sounds                           | Ch.20-(1-2), Ch.21-(1-5)                 | Lab 6: Wave<br>Motion [Vibrating<br>String]           |
|                                                             | R   | -   | October, 4    | Exam 2 (Ch. 2, 4, 5, 6, 7)                            |                                          |                                                       |
| 8                                                           | Tu  | 13  | October, 9    | Doppler Effect, Resonance, Beats                      | Ch.20-(6-7), Ch.19-(6)                   | First Lab Exam                                        |
|                                                             | R   | 14  | October, 11   | Pressure, Buoyancy                                    | Ch.13-(1-7)                              |                                                       |
| 9                                                           | Tu  | 15  | October, 16   | Static Electricity, Coulomb’s Law                     | Ch.22-(1-5)                              | Lab 7: Velocity of<br>Sound [Resonance<br>Column]     |
|                                                             | R   | 16  | October, 18   | Electric Field, Electric Potential                    | Ch.22-(6-9)                              |                                                       |
| 10                                                          | Tu  | 17  | October, 23   | Current, Resistance, Ohm's Law                        | Ch.23-(1-4)                              | Lab 8: Electrostatics                                 |
|                                                             | R   | -   | October, 25   | Exam 3 (Ch. 13, 19-21)                                |                                          |                                                       |
| 11                                                          | Tu  | 18  | October, 30   | Power, Electric Circuits                              | Ch.23-(5-9)                              | Lab 9: Ohm's Law &<br>Simple Circuits                 |
|                                                             | R   | 19  | November, 1   | Magnetism, Magnetic Fields                            | Ch.24-(1-4, 8)                           |                                                       |
| 12                                                          | Tu  | 20  | November, 6   | Electromagnets, Magnetic Force                        | Ch.24-(5-7)                              | Lab 10: Magnetic<br>Fields                            |
|                                                             | R   | 21  | November, 8   | Faraday's Law, Lenz's Law, Generator and Transformers | Ch.25-(1-5)                              |                                                       |
| 13                                                          | Tu  | 22  | November, 13  | Circuit Review                                        | -                                        | Lab 11: The Simple<br>Lens                            |
|                                                             | R   | 23  | November, 15  | Electromagnetic Waves, Colors                         | Ch.26-(1-3), Ch.27-(1-9)                 |                                                       |
|                                                             | Tu  | -   | November, 20  | Thanksgiving Break (No Classes)                       |                                          | No Lab                                                |
|                                                             | R   | -   | November, 22  |                                                       |                                          |                                                       |
| 14                                                          | Tu  | 24  | November, 27  | Reflection, Refraction                                | Ch.28-(1-6)                              | Lab 12:<br>Measurement of<br>Wavelength [Laser]       |
|                                                             | R   | -   | November, 29  | Exam 4 (Ch. 22-25)                                    |                                          |                                                       |
| 15                                                          | Tu  | 25  | December, 4   | Thin Lenses, Ray Diagram, Polarization                | Ch.28-(7-8), Ch.29-(5)                   | Make-up/Review                                        |
|                                                             | R   | 26  | December, 6   | Review                                                | -                                        |                                                       |
| PHY 101 Final Exam is on Tuesday, Dec. 11th, 12:45pm-2:45pm |     |     |               |                                                       | ALL                                      | Second Lab Exam                                       |

Version 1.0  
08/13/2018

This is a tentative schedule and syllabus; guidelines, rules, policies, and due dates can be subject to change at any time throughout the semester. We will try to stick as close to the policies and schedule presented here. The most up to date schedule with up to date policies and topics can be found on MU Online.

## Dr. McBride's Schedule Fall 2018

|       | Monday              | Tuesday             | Wednesday           | Thursday            | Friday             |                     |
|-------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|
| 8:00  |                     |                     |                     |                     |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 9:00  |                     |                     |                     | PHY 202-107<br>S100 |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 10:00 | Office Hours        | Office Hours        | Office Hours        |                     | Herd Hours<br>S179 |                     |
|       |                     |                     |                     |                     |                    |                     |
| 11:00 |                     |                     |                     |                     |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 12:00 |                     |                     |                     |                     |                    |                     |
|       |                     | PHY 101-101<br>S227 |                     | PHY 101-101<br>S227 |                    |                     |
| 13:00 |                     |                     |                     |                     |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 14:00 |                     |                     |                     | PHY 204-103<br>S103 |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 15:00 | PHY 201-102<br>S227 |                     | PHY 201-102<br>S227 |                     |                    | PHY 201-102<br>S227 |
|       |                     |                     |                     |                     |                    |                     |
| 16:00 |                     | PHY 202-103<br>S100 |                     |                     |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 17:00 |                     |                     |                     |                     |                    |                     |
|       |                     |                     |                     |                     |                    |                     |
| 18:00 |                     |                     |                     |                     |                    |                     |