Advanced Biology		YEAR 2020-2021
Location	**Room 204**	
Instructor	**Mr. Rust**	
Planning Period	**Period 4** **Phone: (724) 662 -5104**	**Parent Teacher Conferences may be scheduled before school from 7:45 to 8:00 or during the planning period.**
Email	**lrust@mercer.k12.pa.us**	
Class Website	Grades: https://mercerasdpa.tylertech.com/MercerASDPA_TSI_Live_360/login Google Classroom: https://classroom.google.com/	
Prerequisites	**At least a 'B' in Biology 9 and passed Chemistry**	
Description	**This course will delve further into topics covered in Biology 9. Much of the course will focus on Cells (mitosis/meiosis), Genetics (DNA, protein synthesis, and inheritance patterns), Bacteria/Viruses and Special Topics. Throughout the course there will be various college level lab exercises for each unit. Students may be asked to write lab reports, to present projects and research, and will be required to keep a notebook with vocabulary terms and class notes.**	
Texts Used	• ***Campbell Biology*** **(Pearson Publishing)**	
Homework Policy and Philosophy	**Homework will be assigned periodically throughout the year. It is expected that each student will give his/her best effort on homework assignment-utilizing the textbooks, class notes/examples or research as references to complete homework. When assigned, homework may be checked for being attempted and complete. At the teacher's discretion, homework will be graded for being attempted /completed or for correct answers. Appropriate *work will be shown* which will enable the student and/or instructor to identify errors. Students will be expected to have homework with them when they arrive at class. Homework turned in 1 day late receives 50% credit. If a student is absent, the appropriate amount of time will be given to makeup the assignment. If a student consistently misses homework he/she will be referred to the R.I.S.E. program where he/she will face additional consequences.**	**Homework Philosophy** "The application of homework within almost every learning activity is a valuable means of reinforcement and evaluation. It is the teacher's role to define such assignments and the responsibility of the students to complete them on time. Parents must also assume their responsibility in regard to student homework; therefore, proper communication between the home and the school are vital in establishing assignments, which can significantly contribute to the overall educational process."

Grading **96.5 A+** **92.5 A** **89.5 A-** **86.5 B+** **82.5 B** **79.5 B-** **76.5 C+** **72.5 C** **69.5 C-** **66.5 D+** **62.5 D** **59.5 D-** **Below F**	Students can ask the teacher at an appropriate time (not in the middle of class) to see his/her grade. Grades will be based on: • Quizzes • Tests • Homework • Projects • Lab work • Notebook • Presentations Grades are calculated using total points system. **I use the computer grade book program and update grades at least weekly on the Tyler Grading website. There will be many opportunities for assessment each nine weeks, and homework completion can make a big impact in a students' grade. ANY <u>PROJECT</u> or <u>PRESENTATION</u> NOT COMPLETED RESULTS IN AN "INCOMPLETE" FOR THE 9 WEEKS. Lab work <u>must</u> be made up. An incomplete can turn into an F if the project is not completed within a reasonable amount of time.** **There will be 2-3 student presentations throughout the year. Each presentation will increase in length and is expected to increase in quality as the school**	**Academic Integrity** "Students caught cheating, plagiarizing, copying homework and/or test, quizzes, and using a paper from the Internet will be given a "0" (zero) on that assignment. In addition, their name will be reported to the office and filed in the event of future violations. Repeated violation could result in removal from class and a non-passing grade." **When a student is in jeopardy of failing, a progress report will be sent home. This will occur during the 3rd and 6th weeks in junior high block classes, and any time after the 4th week in other classes.**

	year progresses. **In-class assignments are <u>expected</u> to be done. Completed in-class assignments generally receive an 'E' grade (exempt), meaning these points do not count for or against your grade. However, in-class work NOT completed will receive a '0'.** **Homework (work done mostly outside of class) will be given points. These small points can add up since not many points will be given over the course of a grading period. However, tests/projects/presentations will make up the majority of the grade.**	
Classroom Expectations	1. Respect the classroom, the teacher, and other students. 2. Always be prepared. This includes bringing materials to class and completing homework assignments on time. 3. Take responsibility for getting missed assignments. 4. Do their very best and work to their potential **<u>every day</u>.** 5. Participate. 6. Work "bell to bell". 7. Follow the rules, regulations, and guidelines of the school and school district, in addition to certain laboratory rules. Special laboratory rules will be verbally given to students at the appropriate time.	**Make-Up Work** "Students on a pre-approved trip of more than one day will be expected to makeup any work minimally on the second full day upon the student's return up to a maximum of five days. Students are required to get all missed work prior to pre-approved absence. For one day or one period - school related absence (athletics/academic games, etc) - it is the student's responsibility to make up the work upon their return to the classroom. It is recommended that they see the teacher ahead of time to determine what they will miss while they are gone." **Late to Class** "A student who is late to class will be given a verbal warning on the first offense. Additional offenses will result in a discipline referral to the office."
Required Materials	**A lead pencil or a blue/black ink pen. Students are responsible for bringing their class notebook and textbook. Materials must be in class every day unless otherwise notified**	
Additional Help	**I am available before and sometimes after school when seen in advance by the student. Interested students should ask at least one day in advance to schedule a time.**	**Tutoring** Extra Assistance is available on a regular basis during school in the library. Students should set appointments up with me or the Guidance Dept. in advance to schedule an available tutor.

OUTLINE OF MATERIAL EXPECTED TO BE COVERED IN THIS CLASS	

1st 9 weeks	**Chapter 2 – Basic Chemistry *** **Chapter 3 – Water Properties *** **Chapter 4 – Basic Organic Chemistry *** **Chapter 5 – Macromolecules *** **Chapter 6 – Cells** **Chapter 7 – Cell Membrane/Homeostasis** **Chapter 9 – Cellular Respiration & Fermentation** **Chapter 10 – Photosynthesis**
2nd 9 weeks	**Chapter 12 – Cell Cycle (Mitosis)** **Chapter 13 – Meiosis** **Chapter 14 – Genetics** **Chapter 15 – Chromosomal Basis of Inheritance**
3rd 9 weeks	**Chapter 16 – DNA Replication** **Chapter 17 – Gene Expression** **Chapter 18 – Regulation of Gene Expression** **Chapter 20 – DNA Technology (Biotechnology)**
4th 9 weeks	**Chapter 22 – Evolution by Natural Selection** **Chapter 23 – Evolution of Populations@** **Chapter 24 – Speciation@** **Chapter 27 – Bacteria and Archaea** **Possible (if time permits)** **Chapter 25 – History of Life $** **Chapter 26 – Phylogenetics & Taxonomy $** **Chapter 19 - Viruses**

This syllabus is subject to change at the discretion of the instructor or based upon student interests.