NORTH GARLAND HIGH / RICHALD COLLEGE
COURSE SYLLABUS FOR CONCEPTUAL PHYSICS 1405
FALL 2019

Instructor: Alex Bevly
Email: ajbevly@garlandisd.net

Google Class code ______________
GISD Twitter - @gisdnews
NGHS Twitter - @NGHS_Raiders
GISD Website – www.garlandisd.net
NGHS Website - www.garlandisdschools/NGHS

Course Information:
Title: Conceptual physics
Credits: 4
Start Date: 8/10/2020
End date: 12/18/2020
Last date to drop to drop with a “W”: 11/12/2020

Class meeting information
Lecture: M-F 9:10-10:45, 10:51-1:00, 1:06-2:40 – Room 305
Lab: TBA During Class – Room 305

Prerequisite: DREA 0093 or English as a Second Language (ESOL) 0044 or have met the Texas Success Initiative (TSI) standard in Reading.

Course Description: A survey of Physics for liberal arts and other non-science majors. Topics include mechanics, energy conservation, atomic nature of matter and thermodynamics. The history of scientific developments and their impact on daily life are discussed. Also included are laboratory experiments that emphasize a conceptual understanding of Physics

Course objective / Learning outcomes
The specific objectives are: To understand and apply a method and appropriate technology to the natural sciences; to recognize scientific and quantitative methods and the differences between them these approaches and other methods of inquiry; to communicate findings, analyses, and interpretation both orally and in writing; to recognize the influences and contribution of science to modern culture.

Core curriculum statement
1. Reading: The ability to read and interpret a variety of printed materials – books, articles, and documents – above a 12th grade level.
2. Speaking: Communicate orally in clear, coherent and persuasive language appropriate to purpose, occasion, and audience – above a 12th grade level.
3. Listening: Analyze and interpret various forms of spoken communication, possess sufficient literacy skills of writing, and reading – above a 12th grade level.
4. Critical thinking: Think and analyze at a critical level.
5. Computer literacy: Understand our technological society, use computer-based technology in communication, solving problems, and acquiring information
Course Outline: Subject to change at the discretion of the instructor to insure that all pertinent material is covered.
1. about Science
2. Linear motion
3. Vectors
4. Newton’s laws
5. Newton’s law of gravitation and gravity
6. Circular motion
7. Projectile Motion
8. Rotational motion
9. Energy
10. Work and power
11. Momentum and impulse

Students will practice, design, and implement critical thinking skills and lab investigations that will allow them to:
• Use scientific evidence to verify, revise, and/or reject particular viewpoints
• Make accurate measurements and understand the precision of the data
• Process and organize data into notebooks, tables, and graphs
• Attempt to find patterns of causal relationships by interpreting data
• Use a variety of scientific tools to reason, solve problems, and communicate results in lab reports

Basic Classroom expectations
Be in dress code
Be respectful
No food, drink or gum
No cell phone and any kind of electronic equipment in class

Classroom procedure: Every day agenda will be posted on the board. Follow the agenda for the entire period.

Beginning of class:
1. Turn in your homework at beginning of class
2. Sit in your assigned seat.
3. Bring materials and have them ready
4. Begin your bell work.

During the class
1. If you have a question regarding the curriculum, raise your hand before speaking.
2. Use the pencil sharpener during non-instructional time.
3. Stay on task, listen to directions and complete your assignments
4. Cooperate with your group and do not interrupt other students' learning
5. Respect all ideas given in class and do not criticize anybody's ideas or thoughts
6. No rest room passes during first and last 20 minutes of class

Consequences (IF YOU BREAK THE RULES)
Not necessarily in this order
1. Verbal Warning
2. Relocating Student
4. Contact Parent/Coach
5. Detention
6. Conference w/Parents and AP
7. Referral

Policies and Suggestions for Student Success:
1. **Bell work** will be done daily by the student at the start of each class the entire solution must be recorded in a composition notebook. Bell work will be taken up and graded at random. Therefore, the student should have it completed and with them every class period. **Physics notebooks / binders will be graded at least once per six weeks.** All handouts, class notes, homework, lab reports, quizzes, and tests are to be neatly organized (hole-punched and included in the physics binder.

2. **Exams, Homework and Quizzes:** There are unit exams for each unit and one comprehensive final exam in this course. You will be given homework assignment list for each chapter. It is crucial that you complete and understand every assignment. I encourage you to work as groups on these assignments. You will have the opportunity to correct tests and quizzes for a small increase in your grade.

3. **Lab and Lab Reports: Lab Overview:** (1) Labs are a major part of the course and are weighted accordingly. Everything the student does during the lab period goes toward their lab grade. Focus on the lab and completing the assignment properly. (2) The lab report should have your name, partners’ names, date, title of this experiment, essay, data & calculation, and questions. (3) A scientific calculator, metric ruler, protractor, loose-leaf paper, and graph paper must be brought to each Lab session. (4) During the Lab, group of 2-4 students could work together in data collection and analysis. Lack of participation and collaboration will affect your grade. You will be assigned a lab group and will work in that group during labs. Lab groups will be periodically shuffled at the instructor’s discretion but at least every six weeks. Everyone in your group is responsible for the equipment, which means if something is missing or broken, each of you is accountable. (5) Before leaving the Lab session, let the instructor check your data sheet. Return all apparatus to its appropriate location. Clean up the Lab when finished.

4. **Attendance**
Attendance is critical for participation in the classroom. Before the student can complete a lab successfully, they must know the background material. If a lab is missed, the student will probably not fully understand the concept nor will they be able to answer the follow-up, post-lab questions or lab based questions on tests. **You must be in attendance for 90% of the class time to receive credit for the class.**

5. **Make-Up Work**
- All daily work MUST be made up within ONE class day for each class day you are absent. YOU are responsible for getting notes, assignments, lab information, bell ringers, etc. Pick Up any missed handouts from the Make-up work folders in the room either before or after Class or in tutorials.
- Labs MUST be made up during tutoring times or by appointment.
- Make-up tests and quizzes MUST be made up within two (2) class days during tutoring. If you are absent the day before a scheduled test, you must take the test on the scheduled day Unless otherwise specified. **To receive the class curve for a given test/quiz you must take the test at the prescribed time with the class. No exceptions.**
- Quizzes: Quizzes will be given throughout each unit. I strongly suggest studying for these quizzes. They will focus on critical vocabulary and concepts for each unit.
- If you will be out for known absences (field trips, tournaments, etc) it is highly recommended that You make up any work before you leave.
- No make-up work is given if you were present in class.
6. Extra Credit

Students can bring only any two of the lowest class work/home work grades for each six weeks by doing two extra credit assignments after completing the assignments that earned lowest grade. Extra credit assignments would be more rigorous compared to regular assignments.

*Note Research Paper – You may elect to significantly improve your lowest exam grade by submitting a research paper on a suitable topic covered in this course. Topics must be submitted for approval. The final paper must be submitted by the final exam date and must contain the following elements:
A title page with your name and date submitted
Main text composed of 6 – 8 typed, double-spaced pages with parenthetical documentation (MLA).
A works-cited reference list of a minimum of 4-6 entries in proper format (MLA) should be included.

NGHS Policies
School policies will be followed in all classes. This includes but is not limited to the following: dress Code, attendance, tardies, conduct, food/drinks, cell phones, MP3 players, and materials prohibited On school grounds. These can be reviewed at wwwngraiders.org

Richland Policies:
For Richland Policies, please refer students to http://www.richlandcollege.edu/syllabusinfo/institutionPolicies.pdf

Teacher Contact: The best way to contact me is through e-mail. If you need help after hours, email me. I will try to respond.

Grading Policy
A minimum grade of 70 is required to receive credit for the course. The average will be based on the following:
Classwork/Homework/Quizzes = 60%
Tests/Labs/Projects = 30%
Cycle Exam = 10%

Scale: A = 100 to 90, B = 89 to 80, C = 79 to 70, F = 69 to 0

Tutorials: Tutorials will be offered in room 305 from 2:45 pm – 3:45 pm on Monday through Thursday. Tutorials are mandatory for all students who receive a failing grade on a test.

Supplies Needed
3-ring binder, min. 3-inch with 5 dividers for DC Physics section: (1 Class notes/work, 2 Homework, 3 Labs, 4 tests/quizzes, 5 Reference). This binder must be cumulative. Do not remove or throw any material away at any time during the year. Because of the volume of the material, it is required that you have a dedicated 3-inch binder for physics. AVID students must reserve a 3-inch section of their school binder for physics. In addition to the binder, the following supplies will be required by the second day of school:
Notebook Paper (No spiral paper accepted), Blue or black ink pen, #2 pencil and eraser (all data and computations will be done in pencil- pen is NOT acceptable), Red ink pen for corrections, Composition Book (for Bell work). No spiral notebook will be accepted. 12- Inch ruler with metric graduations, 6-inch protractor.

Supplies Recommended
A scientific calculator will be required to do homework (have it by the end of 1st week for homework). A TI-83/84 calculator will be provided for daily in-class use only. All calculator will be individually numbered and assigned to each student in class. Each student is to use only their assigned calculator at all times. The student is solely responsible for return of their assigned calculator at the end of class. You are expected to have all needed materials in class each day.

Units of Instruction/Class Calendar:

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topics</th>
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<tbody>
<tr>
<td>Aug 10</td>
<td>About science</td>
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<td>Aug 17</td>
<td>Linear motion</td>
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<tr>
<td>Aug 24</td>
<td>Vectors</td>
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<td>Aug 31</td>
<td>Projectile motion</td>
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<tr>
<td>Sep 8</td>
<td>Newton’s first law</td>
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<tr>
<td>Sep 14</td>
<td>Newton’s 2nd &amp; 3rd law</td>
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<tr>
<td>Sep 21</td>
<td>Newton’s 2nd &amp; 3rd laws</td>
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<td>Sep 28</td>
<td>Gravity</td>
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<td>Oct 5</td>
<td>Fall Intersession</td>
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<td>Oct 12</td>
<td>Friction</td>
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<td>Oct 19</td>
<td>Momentum &amp; impulse</td>
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<td>Oct 26</td>
<td>Work power</td>
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<td>Nov 2</td>
<td>Energy</td>
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<td>Nov 9</td>
<td>Conservation of energy</td>
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<td>Nov 16</td>
<td>Simple Harmonic Motion</td>
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<td>Nov 23</td>
<td>Thanksgiving Break</td>
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<td>Nov 30</td>
<td>Circular motion</td>
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<tr>
<td>Dec 7</td>
<td>Rotational motion</td>
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<tr>
<td>Dec 14</td>
<td>Review &amp; Final exam</td>
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I anticipate that this will be a challenging but rewarding year for all of us. We have much to accomplish together, and I look forward to working with each of you! It is my goal to work with the student and the parents toward the student’s best interest. Please feel free to contact me at any time to discuss how we can best accomplish this.

Parents, I request your help in insuring that your student will be in class every day to participate and to monitor his/her class performance. I want your student to excel this year, not just in physics but in all classes. Please feel free to contact me at ajbevly@garlandisd.net

Sincerely,

Mr. Bevly
DUAL CEDIT/ AP PHYSICS Teacher
NGHS

(Sign this section and leave in your binder; I will look for this during each binder check)
I certify that I have read and understand the syllabus and classroom expectations for Mr. Bevly 2019-2020 Dual credit Physics class.

Student Name: ________________________________

Period: ________________________________

______________________________  ______________________
Student Signature                  Date

______________________________  ______________________
Parent Signature                  Date

______________________________  ______________________
Parent Contact Number             Best time to reach

______________________________
Parent email address