**NOTE:** Information in this syllabus should be considered as “preliminary”. All students are responsible for changes announced in lecture and via class Email. Class Email is sent via the Brightspace Learning Management System to the Email address that you were given by the university:  
(typically FIRST.LAST@stonybrook.edu).

# Course Organization

The pure online course is taught every summer and most calendar years. This course is comprised of materials collected during a prior year’s instance of the “Simul-taught” class. The major differences are that the materials may contain out-of-date references (*e.g.* hearing about a snow day while taking the class in June). The class has exactly the same rigor as the prior class since the material is identical.

# Lecture

Lecture recordings delivered by the IVQ (In-Video Quiz) tool accessed via Brightspace. Lecture credit is earned by viewing the IVQ recordings and by answering mouse-based clicker questions.

# Recitation

Recitations are also delivered by IVQ, but do not contain any mouse-based questions.

# Physics for Scientists and Engineers: Foundations and Connections, Extended Version with Modern PhysicsRequired Material

1. Textbook:
   1. Title: Physics for Scientists and Engineers.
   2. Author: Deborah Katz
   3. You may acquire the book in any form:  
      Hardcover, Paperback, Loose leaf, eBook.
   4. The least expensive is eBook (free with WebAssign)
   5. **Be certain that your purchase includes WebAssign.**
2. All Course Information handed out in lecture.
3. A **NON-Programmable** calculator.
   1. Exams allow no formula sheets.
   2. Calculator should have:
      1. Addition, subtraction, multiplication, division.
      2. Trig functions.
      3. Log functions.
      4. Square root.
   3. Calculator must not have ability to store formulas.
   4. Practice with your exam calculator even on homework.
4. An account in the WebAssign system (see below).

# Grade Determination

The grades will be calculated based upon the following percentages:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Exam 1 | Exam 2 | Final | Recitation | Homework | Lecture |
| Percentage | 15% | 15% | 30% | 10% | 15% | 15% |

Letter grades will be assigned according to the following scale:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | A- | B+ | B | B- | C+ | C | C- | D+ | D | F |
| 90-100 | 85-89 | 80-84 | 75-79 | 70-74 | 65-69 | 60-64 | 55-59 | 50-54 | 45-49 | 0-44 |

# Homework

The homework is electronic and delivered through WebAssign. Rosters of the class are uploaded into WebAssign as students merely click on the Brightspace link to access the homework.

# Daily/Weekly Tasks

To aid in student progress, the Brightspace site contains a folder called “Daily Tasks” (summer classes) or “Weekly Tasks”. Each day has a folder that contains a set of course links which aid the student in measuring their own progress. These dates are the DUE DATES. It is highly advisable that students strive to get ahead of the due dates to allow extra study time prior to exams.

# Material & Exam Level

The material covers all the following topics:

* Point Charges
* Electric Forces
* Gauss’ Law
* Electric Potential
* Capacitors
* Ohm’s Law & Kirchhoff’s Laws
* Magnetic Force and Torque
* Ampere’s Law
* Magnetic Field
* Faraday’s Law
* Generators and Transformers
* Transient Response
* AC Circuit Theory
* Light Waves
* Snell’s Law
* Lenses and Mirrors
* Interference
* Diffraction and Polarization

The level of the class can be judged by the following comments on the exams:

* Midterm 1 will include multi-dimensional integration (req’d calc is taught in lecture)
* Midterm 2 will include a problem featuring calculus (req’d calc is taught in lecture)

# Getting Help

## Problem Solving Videos

Problem Solving videos are available via IVQ provide 3% extra credit. They are divided into headings by “learning objective” and are not a perfect match to the book (they are better).

## Review Sessions

Professor Hemmick has developed a tradition of holding **extensive** review sessions outside of class. Recordings of these sessions are put into the Daily Tasks folders on the day before the exam. Since there is ~8 hours of recorded material per exam, students should schedule their time carefully.

The philosophy is simple. The exams in this course are tough but fair. We work hard so that by the time you take them they will seem easy. High scores on a tough exam is the goal of the instructor and should be the same for all students.

# Exams

Exam schedules are embedded into the Daily Tasks folder(s). The exams will be delivered via the homework system (WebAssign). Detailed Email from the professor concerning style and content will precede each exam.

# Student Accessibility Support Center

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, 128 ECC Building, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

# Academic Integrity

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at <http://www.stonybrook.edu/commcms/academic_integrity/index.html>

# Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.