

ECE1813 Electricity and Magnetism

Course Information – Fall 2015

(Last updated Sept. 17th, 2015)

Scheduling Information

Instructor	Section	Labs	Lectures	Tutorial
Name: W.E. Briggs Office Room #: GD114 Office Phone: 458-7274 e-mail: web@unb.ca	FR01A	Mon. 2:30 – 4:30 H200	M, W, F : 8:30 –9:20 H-135	T 9:30 –10:20 H135

Course Text: *Physics for Scientists and Engineers, Volume 4, Third Edition*; by Randall D. Knight; Pearson Addison Wesley
The workbook no longer comes with the text as it has in the past. The text is available at the bookstore. You are expected to buy the text for this course.

Other Resource Materials: will be available on the EE1813 course web site:
<http://www.ece.unb.ca/Courses/EE1813/WEB/>

Information about Marks

Assessment		Numerical to Letter Grade Conversion
Item	Percent of mark	
Quizzes	50	<p>The number to letter grade conversion is not required to be shown and the conversion used is at the discretion of the instructor. The number to letter grade conversion used in this course will not be published. This is to your advantage. If the conversion is published, we have no latitude for making adjustments when determining final grades.</p> <p>Note: Although there is no specific percentage of the final mark associated with the course elements marked “Required,” it is necessary to satisfy the requirements for each of those elements. The requirements are explained in this document.</p>
Assignments	Required	
Labs	Required	
Portfolio	10	
Attendance	Required	
Final Exam	40	
Total	100	

This course is difficult. To provide for yourself the best opportunity for success, please do the following:

- attend all classes — it is the most time efficient way to learn new material and there is a strong relationship between attendance and final grade
- do all assignments — there is a very strong relationship between assignments done and final grade
- get enough sleep — it is difficult to be attentive and to learn if one is over-tired
- eat a healthy diet on a regular schedule
- read this document and keep it in your portfolio.

Introductory Comments

We want you to be successful in this course, to learn the material, and to enjoy the experience. To make those outcomes more likely, please follow the course regulations, protocols, and suggestions in this document. It will save time for all of us.

This document is important! Whatever is written in this course information document constitutes the rules under which the course operates. It is your responsibility to know the regulations. This document answers most of the questions you will have about the scheduling and administration of this course. You should put it in your portfolio binder (explained later in this document) so you can consult it when you need to. This document was written so the instructor(s) will not have to answer the same questions repeatedly. Keep in mind that there are many of you and only one instructor. We all have many demands on our time, so before you come to ask a question about the administration of this course, *please* read this document. If, however, your questions are about the material in the course, you are encouraged to come and ask questions. Also note that the classroom is still the best place to ask questions.

This course moves at a fast pace and covers a lot of material in a short time. Many people find the concepts difficult. If you are to stay on top of it, you will need to do the readings, preferably before the class, and be prepared to ask questions about the things you do not understand. Fortunately for you, the text is quite good and you can learn a lot from reading it. But some important material covered in the class is not in the text, so attendance at class and tutorial is required.

It is our intention that you will learn the fundamental principals of electricity and magnetism and some applications of these principals. It will not be enough that you can solve numerical problems; the blind application of some method of analysis can be done in the absence of solid conceptual understanding. You will need to understand the underlying physical phenomena, and tests will be designed to assess your understanding of them. You will sometimes be required to explain things in words, and your ability to express yourself in written English may be a part of what determines your success. Similarly, you will be expected to read problems expressed in words and be able to understand them.

If you find the material easy at the beginning of the course, do not assume that it will continue to be easy. If you do not work at this constantly, you may get behind and become overwhelmed. This is not a course that you can ignore all term and then teach it to yourself in a few days at the end of term. The first year ECE course has historically had a high failure rate, largely due to disengagement, and your continuous participation is very important. We enforce attendance requirements because this has been shown to improve the outcomes (higher class average, lower failure rate). This course covers interesting material, but it requires work on your part for you to be successful.

Timely Feedback

You will benefit from feedback on the work you have completed: assignments, labs, and quizzes. To get the maximum feedback, you have to pick up your graded submissions. Because of the huge amount of time it takes to provide detailed comments on marked papers, you will get the feedback in the following form.

- assignment solutions, done out in detail, are provided in the Engineering library. Solutions are placed in the library shortly after the assignment is submitted.
- quizzes will be gone over in detail in special sessions that will be announced, and the solutions, done out in detail, are provided in the Engineering library

To get the maximum benefit from your assignments, pick them up and check your answers against the provided solutions, make the corrections, and put them in your portfolio. For quizzes, attend the session where the quiz solutions are gone over, make the corrections, and put them in your portfolio.

Text Information

Course Text: *Physics for Scientists and Engineers, Volume 4*, third Edition; by Randall D. Knight; Pearson Addison Wesley

The workbook no longer comes with the text as it has in the past. The text is available at the bookstore. You are required to buy the text for this course. If you choose not to buy the text, this will probably create unnecessary difficulties for you.

Assumptions & Recommendation: The instructor will assume that you have the textbook. You will be expected to read the text ahead of the classes, and you will be expected to do the problems in the companion student workbook that is packaged with the text. The workbook is a very valuable tool to help you learn the concepts that form the core of this course material. The text is well written, detailed, and has excellent

illustrations that make it a very good part of the learning experience. There may be, however, some errors in the text and these will be on an *errata* sheet that is maintained and posted on the ECE1813 course web site. As errors are discovered or reported and verified, the errata sheet will be updated.

Note that there were errors discovered in the first edition of the text. The errata sheet for the first edition of the text covers most of the errors and will remain on the web site, for those who have that older edition of the text.

Alternate access to the text: There will be one copy of the text on reserve in the Engineering Library, on C level, Head Hall; however, we are going to assume that you all have a copy of the text and the accompanying workbook. The library copy is for convenience or emergency use. Do not rely on it. There will be no library copy of the workbook, and not having the workbook is a definite disadvantage.

Class Attendance

Attendance in all classes and tutorials in this course is a requirement, as per Section 7, University-Wide Academic Regulations, Section I, General Course Regulations, sub-section A (*Class Attendance*), paragraph 1, of in the 2014-2015 UNB Undergraduate Calendar. In particular, note the following passage: “An instructor may assign a final grade of F in the course to a student who fails to meet any one of these requirements, including failure to maintain the stipulated attendance policy.” The policy is that those who miss six (6) or more classes and tutorials will be awarded a grade of F. The lab policy is outlined later on in this document.

There is a direct correlation between attendance and final grade. You will need to do work in the course outside of class, but showing up to class will be a significant factor in your success.

Show some respect for your classmates and please turn off your cell phone while in class. If your cell phone rings, or you are found texting, you will be asked to leave for the remainder of the class and you will be marked as absent from that day’s class. Laptops are not to be open in class for any purpose.

Additional Help:

If you are having a problem with the course material, *it is your responsibility* to arrange to meet with your instructor for some supplementary help. We are here to assist you. There is no reason to be shy about coming for help. For reasons that we don’t always understand, it is the students who least need the help who most often seek it out. Since we cannot force you to come see an instructor for help, it is important for you to recognize when you need help and get it before the difficulties get out of control. If you don’t want to see an instructor for help, there are a few UNB approved tutors available; see <<http://www.unb.ca/cel/support/tutors.html>>. In the past the number of first year ECE tutors has been few, so you may have to seek other alternatives. The tutors list for the current term may be updated a week or two into the term, so you may have to check back regularly until the updates appear.

If the instructor’s office door is open, then he is available to help you. If the instructor’s office door is closed, then he is not available. The instructor’s open office hours may be posted on the bulletin board beside his office door. These may change as the term progresses, and the posting will be updated if that happens. Keep in mind that the instructor has a very full schedule and may have less office time than you might expect. But the instructor is willing to arrange a time to meet with you if you want help. The classroom is still the best place to ask questions; it helps everyone.

Student Portfolio:

Students are required to keep an ECE1813 portfolio. This is a 3-ring binder in which you will keep a copy of the course syllabus, all of your assignments, labs, quizzes, and any other assigned work. You will be provided with a Portfolio Entry Log that you will keep in the front of the portfolio and on which you will indicate the status of every assigned element of the course. You will track each item on this sheet for completion, submission (on time), for having been received after grading, and for correction of errors. The instructor or a lab TA will also check one box in your portfolio entry log when your four tasks are completed and checked for a given submis-

sion. The portfolio can be checked at any point during the term, but will be checked for the final time during the final exam.

The consequence of this portfolio is that every student is required to do every assignment and every lab, and to pick up the graded assignments and labs when completed. Since labs are done in groups of two or three, only one student can have the lab in their portfolio, but the other students in his or her group must have a sheet of paper indicating whose binder contains the lab. *This is not an optional item; it is required to receive a grade in the course.*

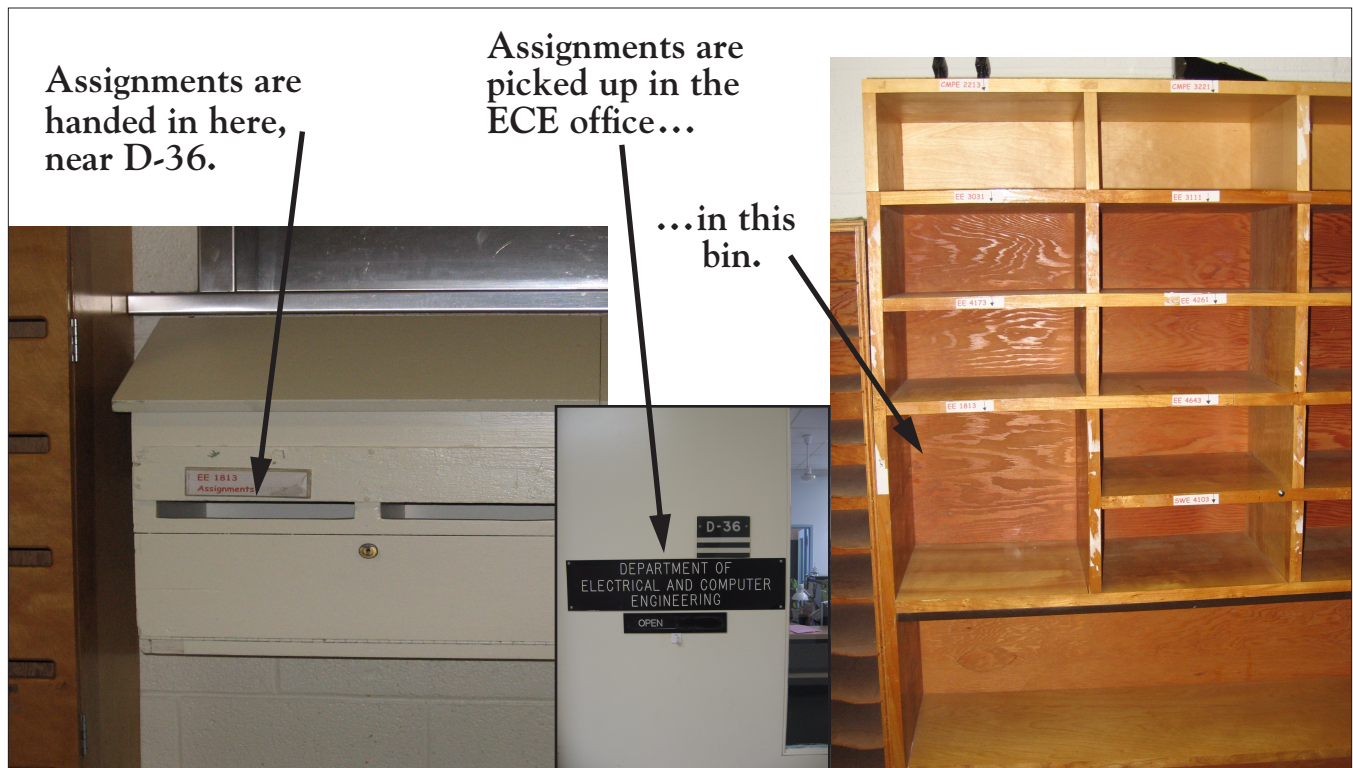
Lab Information:

Note: If you are repeating the course (that is, if you failed EE1713, EE1013, EE1813 or ECE1813), you **MUST** still do the labs. The requirement to repeat labs is a long-standing department policy and there are no exceptions!

Labs	Requirements and Information
<p>Labs will be held from 2:30 – 4:30 in H200. This term they will be held on Monday.</p> <p>Mon. 2:30 – 4:30, H200</p>	<ol style="list-style-type: none"> 1. All lab experiments must be performed (please see important note below). <p>Note: It is your responsibility to show up on the right day at the right time to do the labs. The lab schedule will be posted and it's your responsibility to check it. You should <i>write your lab schedule in your calendar</i> as soon as it is posted. <i>Each student must complete and submit all assigned labs, otherwise a grade of "F" will be awarded.</i></p> <ol style="list-style-type: none"> 2. Lab manuals will be made available in PDF format for downloading from the ECE1813 web site. It is highly recommended that you print a copy of the lab manual, and you must print it at the normal page size, not reduced to two or more pages per sheet. 3. The starting date for labs will be Sept. 21st. 4. Your lab days are determined by your section registration. They will be shown as part of the EE1813 electronic calendar file, also on the course web site. There is simply NO excuse for not knowing when your labs are. 5. Labs must be completed during the lab period. Labs are to be handed in before you leave. 6. A lab group will normally consist of two people, but never more than 3 people. The group will submit one report for each experiment. The mark earned for that lab will be the mark received by each of the participants. 7. Group members should take turns being the scribe. The summary sheets for the lab must be printed full sized on letter size paper (8.5 x 11). Labs submitted on sheets printed 2 pages to a sheet or 4 pages to a sheet will not be marked. In that case a new lab write-up at the proper size will have to be resubmitted. 8. The lab write-up will make up 100% of the lab mark. Attendance is required, but does not count for any marks. 9. If you must miss a lab for any reason, let the instructor or lab coordinator know before the lab. If this is not possible, let them know at the first possible opportunity. Delay in notifying them may result in a mark of zero (0) for the lab, even after you have done a make-up lab. 10. If you have missed a lab, you must do a make-up lab before the end of the term (a lab makeup day has been scheduled near the end of term to give a final opportunity to make up a missed lab). After the scheduled make-up lab day, the opportunity to do the make-up lab will pass and the instructor may award an automatic "F" in the course. The only exceptions allowed will be in the case of valid medical reasons. Medical issues require a valid medical excuse. 11. <i>Whatever is done in the lab can appear on a quiz or the final exam.</i>

Assignments & Tutorials

What You MUST Know	Important Additional Information
<ol style="list-style-type: none"> 1. <i>Tutorials are treated as regular classes in this course.</i> Attendance at tutorials is mandatory. 2. Later in the term there may be some additional optional <i>help sessions</i> to help you prepare for the quizzes and the exam (typically about 12 to 16 hours of such sessions are offered prior to the exam). 3. Assignments that are required to be handed in are to be placed in the designated box in the hallway on D level before 4:00 P.M. (1600 hrs) on the next Friday after the day the assignment was given (see the illustration below). 4. Solutions to the assignments will be placed in the Engineering Library no later than noon on the Tuesday of the week following the submission of the assignment. 	<p>Tutorials begin the first week.</p> <p>It is not required that the instructor(s) offer these optional help sessions; they are given on the instructor's time for your benefit. It is highly recommended that you attend. Scheduling will be announced in class and by e-mail.</p> <p>If you are not able to hand in the assignment on time, be sure to <i>see the instructor before</i> the deadline. Being "too busy" or having mid-terms is not a valid reason for a late assignment. Everyone here is very busy. If you come to see the instructor after the deadline, only a signed medical excuse will be accepted. Assignments that are late being completed must still be submitted, and they will be graded by the marker. They still have to be corrected and put in the portfolio.</p> <p>Graded assignments will be placed in a return bin in the main ECE office (see the illustration below). Please respect your classmates, demonstrate your professionalism, and take only your own assignments from the return bin. Assignments should be picked up as soon as they have been put in the bin.</p>



Scheduled Quizzes

There will be six (6) scheduled quizzes given during the term. You must write at least five (5) of the quizzes or a grade of "F" may be awarded. If you write all six (6) quizzes, the five (5) highest quiz marks will be used to calculate your final grade. These

quizzes are important as they constitute 50% of your final grade. Quizzes will be written on the following dates: Sept. 25th, Oct. 9th, Oct. 23rd, Nov. 6th, Nov. 20th, and Dec. 4th.

Final Exam

The final exam will:

- be of three (3) hours duration
- be scheduled by the registrar
- cover the entire course (Chapters 25, 26, 29, 30, 31, 32, and 33 of the third edition of Knight, except sections specifically excluded by your instructor, plus all material used in the latter portion of the course. Those who have the second edition of Knight should note that the chapter numbers are different; the first edition begins at Chapter 26.) *You will be responsible for any material covered in the class that may not be in the texts, and any material covered in the lab that may not be in the texts. Attendance in class is required and it is assumed that you have been there.* Handouts may be given for material covered near the end of the course. This material will not be in the course text.

Note: You *must pass the final exam* in order to pass the course.

Deferred Exams

University regulations on deferred exams are described in the current on-line Undergraduate Calendar. All deferred exams in courses offered by the Department of Electrical and Computer Engineering are scheduled to be written on the fourth day of classes in the following term. There are no exceptions.

Add and Drop Dates

You may not add this course after: September 18th, 2015

The last day to drop this course is:

Conditions that apply to dropping course	Date
<ul style="list-style-type: none">• Course will not show on your transcript• Refund available	Until: September 18th, 2015
<ul style="list-style-type: none">• Course shows on your transcript as a "W"• <i>NO refund available</i>	Until: Nov. 2nd, 2015

E-mail Communication Between Instructor and Student

E-mail is considered an official form of correspondence, but the volume and nature of e-mail has become an issue for faculty. In this course e-mail correspondence is to be conducted according to the *E-mail Protocol* available on the course web site. In this course the instructors prefer that you speak to them in person instead of sending e-mail.

Additional Course Resources

The URL for the EE1813 course page is: <http://www.ece.unb.ca/Courses/EE1813/WEB/>

The web site may change from time to time, but the following information will be made available on the EE1813 course page as the term progresses:

- Labs, as well as links to any supporting materials
- Equation sheets for tests and the exam,
- Textbook errata,
- Lab schedule, once it has been determined
- Links to useful material,
- Names and e-mail addresses of lab TAs and assignment markers for the course
- and anything else that is deemed to be appropriate.

Academic Integrity

The University of New Brunswick places a high value on academic integrity and has a policy on plagiarism, cheating and other academic offences.

Plagiarism includes:

1. quoting verbatim or almost verbatim from any source, including all electronic sources, without acknowledgement;
2. adopting someone else's line of thought, argument, arrangement, or supporting evidence without acknowledgement;
3. submitting someone else's work, in whatever form without acknowledgement;
4. knowingly representing as one's own work any idea of another.

Examples of other academic offences include: cheating on exams, tests, assignments or reports; impersonating somebody at a test or exam; obtaining an exam, test or other course materials through theft, collusion, purchase or other improper manner, submitting course work that is identical or substantially similar to work that has been submitted from another course; and more as set out in the academic regulations found in the Undergraduate Calendar.

Penalties for plagiarism and other academic offences range from a minimum of F (zero) in the assignment, exam or test to a maximum of suspension or expulsion from the University, plus a notation of the academic offence on the student's transcript.

For more information, please see the Undergraduate Calendar, Section B, Regulation VII.A, or visit <http://nocheating.unb.ca>. It is the student's responsibility to know the regulations.