PHYS*1020 Introductory Physics  
Fall 2014 Course Outline  
University of Guelph  
Department of Physics

Course Information

General Information
The Purpose of this Course: This course is equivalent to a senior high school physics course. It provides a solid foundation in mechanics, electricity and waves for students prior to taking first-year university physics courses such as IPS*1500, PHYS*1010, PHYS*1070, PHYS*1080, and PHYS*1130. Students who have received a credit in OAC Physics or 4U Physics may not take PHYS*1020 for credit.
Course Credit Weight: 0.5

Academic Misconduct
The University of Guelph takes a serious view of academic misconduct and will severely penalize students, faculty and staff who are found guilty of offences associated with misappropriation of others' work, misrepresentation of personal performance and fraud, improper access to scholarly resources, and obstructing others in pursuit of their academic endeavors. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.
Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor. Each student is assumed to be familiar with the regulations surrounding academic misconducts, as spelled out in the Undergraduate Calendar.
http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml

Course Related Information and Contact
Quiz Room Location: SSC1101A
Laboratory Location: MacN301
Tutorial Room: MacN401
Lost and Found: "Lost and Found" is in the Quiz Room (SSC1101A).
Quiz Room Hours: Posted on D2L – see Quiz Room Operating Hours
Lab Room Hours: Posted on D2L – see Lab Room Operating Hours.
Extra opening times may be added depending on enrolment.
Main Course Contact

<table>
<thead>
<tr>
<th>Quiz Room Supervisor</th>
<th>Office</th>
<th>Extension</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cindy Wells</td>
<td>SSC1101A</td>
<td>52445</td>
<td><a href="mailto:cwells@uoguelph.ca">cwells@uoguelph.ca</a></td>
</tr>
</tbody>
</table>

Please contact the Quiz Room Supervisor with all course related inquiries and email to report any illness or errors in your D2L record.

Desire2Learn (D2L)

Students in this course will need to use Desire2Learn (D2L) to write required Pretests, and check their term marks. As soon as possible, you should check that you can log in to D2L:

* Use a web browser to go to: http://courselink.uoguelph.ca/
* Follow the D2L login instructions.

Instructor

<table>
<thead>
<tr>
<th>Lecturer</th>
<th>Office</th>
<th>Extension</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joanne O’Meara</td>
<td>MacN 323</td>
<td>53987</td>
<td><a href="mailto:omeara@uoguelph.ca">omeara@uoguelph.ca</a></td>
</tr>
</tbody>
</table>

Lecture Sections

<table>
<thead>
<tr>
<th>Section</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Monday, Wednesday and Friday</td>
<td>10:30am – 11:20am</td>
<td>ALEX200</td>
</tr>
<tr>
<td>02</td>
<td>Monday, Wednesday and Friday</td>
<td>3:30pm – 4:20pm</td>
<td>ROZH101</td>
</tr>
</tbody>
</table>

Text & Other Required Materials

1. Textbook: PHYSICS FOR TOMORROW’S WORLD 2ND REVISED EDITION, E. L. McFarland/A. J. Hirsch, bundled with an access kit to the online homework system called Enhanced Web Assign (EWA). Available in the university bookstore or the co-op bookstore.

   NOTE: If you have a used copy of the text, it will not have an access kit to EWA. If you would like to make use of this helpful learning tool, you have two options, both available through NelsonBrain.com:
   a. Purchase a stand-alone access kit for $49.95
   b. Purchase EWA access with the e-book for $73.95


   Booksale - The Quiz Room will be open for the sale of manuals Thursday, Friday, Monday, Tuesday, Wednesday. September, 4-10 from 9am - 12pm and 1pm - 4pm. After Sept. 10th during regular quiz room hours.

3. TopHat subscription – TopHat is a classroom response system that makes use of your own smart phone and the lecture room WiFi, available at app.tophat.com. A one-semester subscription costs $20 or a five-year subscription is $38. If you have been
asked to buy an i-clicker response system for other classes, TopHat will give you a 50% reduction in subscription price with proof of purchase of the i-clicker.

a. For section 01 (10:30 to 11:20 am), the TopHat course URL is: tophat.com/e/428824
b. For section 02, (3:30 to 4:20 pm), the TopHat course URL is: tophat.com/e/594767

Please note that both EWA and a subscription to TopHat are optional. We believe that you will find both to be useful supplemental learning tools, but your final grade will be calculated with or without your participation in these systems and the higher of the two will be awarded at the end of the semester.

4. The following items are available on D2L:
   a. Sample Quiz for each section
   b. Sample Midterm Examinations
   c. Sample Final Examinations

5. Calculator (get one with trig functions, e^, etc.) (graphing calculators and any electronic devices are not allowed in the quiz room or at exams).

6. This Course Outline: includes important dates and deadlines, lecture schedule, evaluation information, etc.

**Approximate Lecture Schedule**

<table>
<thead>
<tr>
<th>Week(s)</th>
<th>Topic(s)</th>
<th>Textbook Chapter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, and part of week 3</td>
<td>Describing motion – velocity, acceleration, etc</td>
<td>1, 2, 3 and 4</td>
</tr>
<tr>
<td>3 and 4</td>
<td>What controls motion? – forces and Newton’s Laws</td>
<td>5 and 6</td>
</tr>
<tr>
<td>5, 6 and part of 7</td>
<td>Energy and momentum – another way of understanding motion</td>
<td>7 and 8</td>
</tr>
<tr>
<td>7</td>
<td><strong>Midterm test will take place in class on Wednesday October 22</strong></td>
<td>Covers all of Study Guides 1 to 4 (Chapters 1 to 7 of text)</td>
</tr>
<tr>
<td>7 and part of 8</td>
<td>Gravity – what is weightlessness and why don’t satellites fall to earth?</td>
<td>9</td>
</tr>
<tr>
<td>9, 10 and 11</td>
<td>What are volts and amps, and how do electric circuits work?</td>
<td>11 and 12</td>
</tr>
<tr>
<td>12</td>
<td>What are waves, and how do they behave? e.g. light</td>
<td>13 and 14</td>
</tr>
</tbody>
</table>
Online Homework

In order to enroll in the EWA course page, you will need to use one of the following class keys:

1. **Section 01**: 10:30 to 11:20 am lectures - uoguelph 9044 0613
2. **Section 02**: 3:30 to 4:20 pm lectures - uoguelph 1500 5048

During the course of the semester there will be 5-6 optional online homework (EWA) assignments for students to complete. Students have the option of completing these assignments or have their Midterm and Final exams weighting adjusted as shown below.

**Evaluation**

These two evaluation options are available to students as illustrated below. The course grade will be calculated based on the scheme that produces the highest grade:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Scheme #1</th>
<th>Scheme #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (4x8%)</td>
<td>32%</td>
<td>32%</td>
</tr>
<tr>
<td>Online Homework (EWA)</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Experiments (5x2%)</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>(Pass=2%, Fail =0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Evaluation of Quiz Marks**

Quizzes are marked out of 10

8/10 or higher receive 10 out of 10 (highest possible mark per unit) between 4.0/10 and 7/10 (inclusive) receive 2 marks per attempt less than 4/10 receive zero

The partial mark of 2 does not add to a mark of 10. It is awarded on the condition you do not receive a “pass” on any attempt on a unit quiz. See the examples below.

**Four examples:**

1. A student earns 4.0/10 on the first quiz attempt, 6.0/10 on the second quiz attempt, and 8.0/10 on the third quiz attempt. Mark received: 10 out of 10.
2. A student earns 4.0/10 on the first quiz attempt, 5.5/10 on the second quiz attempt, and 7.5/10 on the third quiz attempt. Mark received: 6 out of 10.
3. A student earns 2.5/10 on the first quiz attempt, 4.0/10 on the second, and 7.5/10 on the third. Mark received: 4 out of 10.
4. A student earns 7.5/10 on the first quiz attempt and tries no further quizzes. Mark received: 2 out of 10.
**Midterm Exam:**

**Midterm Exam Date:** Wednesday October 22, 2014 in Class

**Time:** Section 01: 10:30am to 11:20 am, Section 02: 3:30pm to 4:20 pm

The midterm will consist entirely of multiple choice questions. Sample midterm exams are available through D2L.

**Final Examination**

**Final Exam Date:** Thursday, December 4, 2014 from 8:30am to 10:30am.

Details regarding the location will be available through D2L later in the semester. The final examination will consist of multiple choice and short-answer problems. Sample final examinations are available through D2L.

**Quiz Deadlines and Important Notes**

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Thursday, September 4</td>
<td>Quiz Room Opens for Writing</td>
</tr>
<tr>
<td>4</td>
<td>Wednesday, October 1</td>
<td>Last day for <strong>Quiz #1</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Requirements:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.  <strong>Pretest 1 (on-line)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.  Unit conversion &amp; significant digits (Study Guide 1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.  1D Kinematics (Study Guide 1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.  Vectors (Study Guide 1)</td>
</tr>
<tr>
<td>6</td>
<td>Thursday, October 16</td>
<td>Last day for <strong>Quiz #2</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Requirements:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.  <strong>Pretest 2 (on-line)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.  2D Kinematics (Study Guide 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.  Uniform circular motion (Study Guide 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.  Inclined planes (Study Guide 3)</td>
</tr>
<tr>
<td>10</td>
<td>Wednesday, November 12</td>
<td>Last day for <strong>Quiz #3</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Requirements:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.  <strong>Pretest 3 (on-line)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.  Momentum &amp; collisions (Study Guide 5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.  Gravitation (Study Guide 6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.  Electric charge &amp; Coulomb’s law (Study Guide 7)</td>
</tr>
</tbody>
</table>
Last day for Quiz #4

Requirements:
1. Pretest 4 (on-line)
2. Electric fields & Potential (Study Guide 8)
3. Electric circuits & Ohm’s law (Study Guide 9)

Obtaining Help in the Course

1. Brief questions can be answered by the course professor after lectures. Otherwise, the instructor will be available during office hours. Office hours will be announced in class.

2. Scheduled tutorial sessions – Staffed by your lab TA.

3. Supported Learning Groups (SLG’s) - Organized through the Learning Commons at the library, SLG’s provide an opportunity for you to meet regularly with your classmates to discuss course concepts, to practice using new vocabulary and skills, and to test yourself before quizzes and exams. SLG sessions are led by trained Peer Helpers who have recently taken the course and done very well (please note that SLG’s are not a replacement for the physics help provided in the department). There will be in-class announcements soon to inform you of the meeting times.

4. Step-by-step problem solving exercises developed specifically for this course, covering each major unit at:
   a. www.physics.uoguelph.ca/~phyjlh/SPS/
   b. www.physics.uoguelph.ca/tutorials/tutorials.html

Laboratory and Tutorials

Laboratory Exercises

The laboratory activity will be assigned a pass or fail distinction by the TA at the end of the laboratory period. You must show your TA your results by the end of 90 minutes in the laboratory session. The remaining 20 minutes of your assigned time will be available for students to correct mistakes (when necessary) in order to allow for reassessment by the TA. It is crucial that you read the instructions in your lab before you arrive for the experiment. Failure to adequately prepare for the session may result in the assignment of a failing grade for that experiment.

Tutorials

Periods for obtaining help with the course material.
Laboratory (MacN301) / Tutorial (MacN401) Schedules

You selected a particular lab section when you registered for the course. You must attend your lab section; do not attempt to complete the exercise in another time slot. For all lab sections, each of the experiments will take place as follows:

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>September 15 to 19</td>
<td>Tutorial/Help Session</td>
</tr>
<tr>
<td>3</td>
<td>September 22 to 26</td>
<td>Experiment #1 – Introduction to the use of motion sensors and DataStudio</td>
</tr>
<tr>
<td>5</td>
<td>October 6 to 10</td>
<td>Tutorial/Help Session</td>
</tr>
<tr>
<td>7</td>
<td>October 20 to 24</td>
<td>Experiment #2 – Newton’s 3\textsuperscript{rd} law</td>
</tr>
<tr>
<td>8</td>
<td>October 27 to 31</td>
<td>Experiment #3 – Conservation of energy</td>
</tr>
<tr>
<td>9</td>
<td>November 3 to 7</td>
<td>Tutorial/Help Session – Experiment #4 (take-home exercise) is DUE</td>
</tr>
<tr>
<td>11</td>
<td>November 17 to 21</td>
<td>Experiment #5 – Ohm’s Law</td>
</tr>
</tbody>
</table>

Contact your lab TA immediately if you miss your scheduled lab.

Quiz Room Information

Quiz Room Protocol

- Students must show their U of G photo ID card in order to write a quiz.
- Only 1 quiz attempt per time slot allowed on same quiz group.
- Your 1st attempt should be at least 3 time slots before the deadline to allow for a possible 2nd or 3rd attempt. All quizzes are available from week 1 and they can be written as early as you want. The dates above only reflect the last possible date that particular quiz is available to write.
- No credit will be granted for labs or quizzes completed during a previous semester.
- **Book Bag Lock (optional)** – Book bags are not allowed to be taken to your quiz writing station in the quiz room. The designated area for book bags is equipped with cables for locking (you must bring your own lock).
- Pretests must be passed with a minimum of 60% before the required quiz is attempted. Allow at least 1 hour for your Pretest grade to be processed.
- If you absolutely cannot stay to have your quiz marked, you may leave it. It will be marked at the end of the quiz period and the mark posted. It will be available for you to look at for two further quiz periods.
- **All electronic devices must be concealed while in the quiz room ie, cell phones, lap tops, ipods, tablets etc.**
• All quizzes remain in the quiz room.
• Wait quietly to have your quiz graded by the TAs. If you miss hearing your name your quiz will be graded in your absence.

The Pretests

Before any quiz can be written for credit, a Pretest must be taken and passed at the level of 60%. Allow at least 1 hour prior to attempting related quiz. These Pretests are designed to permit a self-examination of the basic concepts and objectives of the modules in question. Each Pretest consists of a variety of simple questions in one of 4 formats:

1. multiple choice
2. true or false
3. pairwise matching
4. enter a number or symbol

The Pretests are delivered using D2L and so can be taken from any location which has computers connected to the internet. Login instructions are given on page 2.

Follow the login instructions and the instructions which follow enabling you to take the Pretest. Upon completion it will be marked and an explanation provided for every question for which you selected the wrong answer. These should be studied carefully.

When you obtain at least 60% on the Pretest, you may proceed to the Quiz Room to write a quiz for credit. (Allow at least 1 hour for your mark to process before attempting related quiz).

If you failed to get 60%, you must repeat the Pretest until 60% is obtained. Pretests are unlimited.

Of course, you get the maximum advantage from these Pretests if you do them without help and, as much as possible, without aids (textbook, etc.).

It is a serious academic offence to copy, print or otherwise store the Pretests or to attempt to alter them in any way.

Also available on D2L are Sample Quizzes for each Study Guide, similar to quizzes that you will write in the Quiz Room.

Quizzes

You can in principle try quizzes in any order. However, note that quizzes are withdrawn on specific dates (see page 5), so these should be attempted as appropriate. A non-credit Pretest must be passed (minimum 60%) before its Quiz can be written for credit. The Pretests are available on D2L.

Each Pretest is an aid to help you learn the material contained in the associated Study Guide. See page 8 for Pretest details. When you have passed the Pretest (min. 60%), you should have acquired a basic understanding of the material in the Study Guide and you are now ready to write the quiz. The format of the Pretest is different from that of the quiz. A sample of each quiz is provided on D2L for you to look at. The quiz tests mastery of that material, and so you may find that you do not pass the QUIZ on the first attempt.

You will need your University of Guelph photo ID card in order to write a quiz. The time allotted for each quiz is 20 minutes. When you have completed the quiz, it is marked immediately by a tutor in your presence. In this way, no time is wasted teaching you things you
already know, but the quiz will isolate those things (if any) you don't know. The tutor will give you help on the spot when time permits otherwise please visit our help room (location and open hours are posted on D2L). It is important to emphasize the diagnostic aspect of this quiz; diagnosis is its prime purpose. It is of no value to write one if you are not prepared; you are wasting everyone’s time. The level at which you are considered to have "mastered" the material is 80%, i.e., the "pass mark" is 8 out of 10.

Each quiz that is mastered contributes 8% toward your course mark. If you do not get 80% on your first attempt (and you may not), it doesn't matter. There is no stigma attached to failing this quiz; that is not its purpose. You may go away, study, and try again. The quiz will have served to show you what you must study for that section. Obviously there must be a limit to the number of times you may write a version for each quiz, and this has been set at three. **Also, you may not attempt more than one version of each quiz in a single quiz period.**

During quizzes (as well as the midterm and final examinations), you may use a pocket calculator (**graphing calculators or any other electronic devices are not allowed**). In the quiz room, each desk is provided with a sheet of formulae. A copy of this sheet will be included in the midterm and final exam. **No material in the form of quizzes or paper may be brought in or taken from your assigned station in the Quiz Room and all paper used when writing a quiz must be turned in.** You should visit the quiz room during the first week of the semester to see how the system operates.

Self-paced study is a new experience for most students. At best, it permits you to work ahead in physics early in the semester, freeing study time for other courses during heavy weeks. At worst, there is a temptation to leave things too late. To help pace students, deadlines are placed on quizzes. (Refer to page 5.)

Course and University Policies

**Academic Misconduct**

The University of Guelph takes a serious view of academic misconduct and will severely penalize students, faculty and staff who are found guilty of offences associated with misappropriation of others' work, misrepresentation of personal performance and fraud, improper access to scholarly resources, and obstructing others in pursuit of their academic endeavors. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor. Each student is assumed to be familiar with the regulations surrounding academic misconducts, as spelled out in the Undergraduate Calendar.

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml
Accuracy of Records

It is your responsibility to use D2L to check that your marks are recorded correctly. Please check your record often and report any discrepancies immediately to the Quiz Room Supervisor (email address on page 2). As an aid, a ‘Personal Record Form’ is provided on D2L. You should use this form to record your quiz attempts, etc., and from time to time check the computer record against your personal record.

Illness

If you are away for brief periods of time due to medical, psychological or compassionate reasons, see the Quiz Room Supervisor (email address on page 2) about consideration of extension of quiz deadlines, etc. For an extended illness, etc. (> 1 week), you should obtain a medical certificate or similar documentation and consult the quiz room supervisor or the instructor immediately in order to make up a missed quiz (do not wait to submit your document at the end of the semester). If you miss the midterm, you need to provide the instructor with appropriate documentation upon your return. If you miss the final examination because of illness or for other reasons, see your Program Counsellor. Attendance at the laboratory is, of course, very important. If you miss a laboratory experiment because of illness, or for compassionate reasons, please see your laboratory/tutorial instructor for possible academic consideration.

See the undergraduate calendar for information on regulations and procedures for Academic Consideration:

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Course Notices

From time to time, notices pertaining to the course will be posted on D2L, given in lectures and/or posted by the Quiz Room door or inside the quiz room (SSC1101A). You should check this door and room weekly for notices and reminders, etc. It is your responsibility to keep yourself informed regarding these special announcements.

E-mail Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

Drop Date

The last date to drop one-semester courses, without academic penalty, is Friday, October 31. For regulations and procedures for Dropping Courses, see the Undergraduate Calendar:

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml
Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities (soon to be re-named Student Accessibility Services) as soon as possible.

For more information, contact CSD at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: http://www.csd.uoguelph.ca/csd/

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Material recorded with permission is restricted to use for that course unless further permission is granted.

Course Evaluation

The Department of Physics requires student assessment of all courses taught by the Department. These assessments provide essential feedback to faculty on their teaching by identifying both strengths and possible areas of improvement. In addition, annual student assessment of teaching provides part of the information used by the Department Tenure and Promotion Committee in evaluating the faculty member's contribution in the area of teaching.

The Department's teaching evaluation questionnaire invites student response both through numerically quantifiable data, and written student comments. In conformity with University of Guelph Faculty Policy, the Department Tenure and Promotions Committee only considers comments signed by students. Your instructor will see all signed and unsigned comments after final grades are submitted. Written student comments may also be used in support of a nomination for internal and external teaching awards.

NOTE: No information will be passed on to the instructor until after the final grades have been submitted.

Conflicts with Midterm Exams in other Courses:

Sometimes students will have a conflict between a midterm exam in another course and either a lecture or a lab in this course. The University has a very clear and well-defined policy to cover this situation: the regularly-scheduled lecture or lab holds priority. In other words, it is the responsibility of the faculty member who has scheduled the midterm exam to make special arrangements with students who have conflicts. This policy is stated explicitly in the Undergraduate Calendar under the heading “Midterm Examinations”.