

PHYSICS 1020

FALL 2019

Your Instructor

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(checked frequently during business hours and
less frequently on evenings and weekends)

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Your instructor studying waves on a spring.

My philosophy:

Teaching is a team effort and the team is the student, the instructor, the lab staff, and the Help Centre staff.

Your Course:

Physics 1020: Introductory Physics I

Introduction to Physics (Chapter 1.1 – 1.8, *1 lecture*)

One-dimensional Kinematics (Chapter 2.1 – 2.7, *4 lectures*)

Vectors in Physics (Chapter 3.1 – 3.6, *4 lectures*)

Two-dimensional Kinematics (Chapter 4.1 – 4.5, *3 lectures*)

Newton's Laws of Motion (Chapter 5.1 – 5.7, 6.1 – 6.5, *7 lectures*)

Work and Kinetic Energy (Chapter 7.1 – 7.4, *2 lectures*)

Potential Energy and Conservation of Energy (Chapter 8.1 – 8.5, *2 lectures*)

Linear Momentum and Collisions (Chapter 9.1 – 9.8, *3 lectures*)

Rotational Kinematics and Energy (Chapter 10.1 – 10.6, *2 lectures*) (optional topic)

Rotational Dynamics and Static Equilibrium (Chapter 11.1, 11.3, 11.4, *3 lectures*)

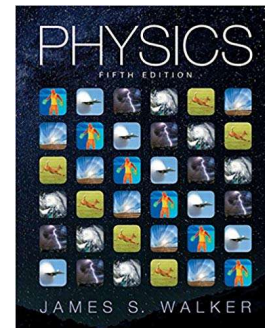
Gravity (Chapter 12.1, 12.2, *1 lecture*)

Prerequisite/Corequisite: Mathematics 1090

Course Description: <http://www.mun.ca/regoff/calendar/sectionNo=SCI-1574>

Your Books: Textbook:

- **Physics (with Mastering Physics access code)**, by James Walker 5th ed.
Available from the MUN bookstore for \$120.00.
- The companion student workbook is not required.



Lab Book:

- Physics 1020 Laboratory Workbook.
- Available from the MUN bookstore.

Your Physics and Physical Oceanography Department:

General Office: C 3005

Department Head: Dr. Poduska C 3000

Academic Program Officer: Dr. Goulding C 3004

Your Resources:

Help Center:

The Physics Help Center is in C-3071. The schedule is posted on the Help Centre door. It is staffed by lab personnel and faculty.

Peer Study Groups:

I recommend the formation of informal peer study groups. Learning with peers can be a useful way to maximize learning. Students are most welcome to use the Help Centre to meet for peer study groups. Recommended meeting times are Mondays 2:00 – 4:00 and Wednesdays 10:00 – 12:00.

Webpage:

Brightspace will be your main source of information for announcements, notes, schedules, and practice problems.

To access: go to *online.mun.ca*

Login using your MUN ID and password (obtained using your student number and PIN) and click the link to Physics 1020 Fall 2019.

Check Brightspace and MUN email frequently for updates.

Social media accounts: *physics_shorlin* on Snapchat and *Physics Memorial University of Newfoundland* on YouTube.

Other resources are available from *http://www.mun.ca/physics/undergraduates*.

Schedule:

Most dates are listed in this document and will be posted on Brightspace for lab, lecture, assignment and exam dates.

Office Hours:

Mondays and Wednesdays 3:30 – 4:30 (or by appointment). You are encouraged to drop by with concerns and questions!

Lab and Help Centre Staff:

You’ll see most of these people over the term so it’s good to be able to match names and faces.

Marek Bromberk

Chris Deacon

Edward Hayden

John Jerrett

Shahrazad Malek

LiQiu Men

Justin Pittman



Your Schedule:

Lectures: Monday, Tuesday, Thursday 1:00 – 1:50 IIC 2001

Labs: Section 002 Friday 3:00 – 4:50 C 2038

Section 003 Thursday 3:00 – 4:50 C 2038

Section 005 Wednesday 12:00 – 1:50 C 2038

Section 006 Tuesday 3:00 – 4:50 C 2038

To Get The Most Out Of Your Lectures:

- The weekly readings, PowerPoint slides, and suggested problems will be posted on Brightspace before class. You should review all the material prior to coming to class.
- Notes will be added to the PowerPoint slides during the lectures so it is recommended that you print these prior to class and make notes as you go.
- Participation will be expected during every class. You will have the opportunity to work with fellow students and contribute to the class.
- Ask questions! If you are wondering about something, chances are good other people are too and you’ll be helping the whole class by asking.

Your Workload:

Labs.....	10%
Mastering Physics Assignments.....	8%
Written Assignments	8%
Problem Solving Sessions.....	4%
Term Test 1.....	15%
Term Test 2.....	15%
Final Exam.....	40 %
Total.....	100%

Labs (10%):

There are 6 laboratory experiments in this course; dates are listed here.

Labs are in C 2038. The lab period is 1 hr 50 mins long.

Prelab quizzes count as part of your grade and are available from <http://www.mun.ca/physics/undergraduates/fylabs/p1020/manual.php>.

You must notify Dr. Shorlin in writing **within 7 days** for any absences.

You must pass the labs to pass the course.

There are no lab waivers for students repeating the course.

Dates**Keys to success**

Introduction: Sept 10 – 13

Lab 1: Sept 17 – 20

Complete your prelab questions

Lab 2: Sept 24 – 27

Work with your partner and ALWAYS

Lab 3: Oct 8 – 11

Do your own work

Lab 4: Oct 18 – 24

Try before you ask for help and NEVER

Lab 5: Nov 1 – 7

Be afraid to ask for help

Lab 6: Nov 8 – 14

The lab is a place to do, think, and learn

Lab Skills Test: Nov 19 – 22

Students who do not notify Dr. Shorlin within 7 days of an absence will receive a grade of 0 on the missed lab.

Mastering Physics Assignments (8%):

There will be regular Mastering Physics assignments over the semester.

Access your Mastering Physics through Brightspace.

Register using your MUN email address.

Use the access code that came with your textbook (or use the 14 day free trial).

Choose Physics 1020 and click the link for Assignments.

Work on the problems and enter your answers. Click ‘Submit’ after you type in an answer. You will have multiple attempts to get each problem correct although you may lose points for using multiple tries. The computer will automatically submit your answers.

Tips for success:

- Print your assignments and keep a notebook of workings.
- Try hard on your own but come to the Help Centre for help if you are stuck.
- Don't put them off until the last minute! Working a little every day will help you stay on top of the material.

Written Assignments (8%):

There will be regular written assignments over the semester.

Questions will be posted during class and will also be posted on Brightspace.

Complete organized solutions must be submitted on a sheet with a header showing your lab day and time.

Feedback and solutions will be provided after the due date.

Problem Solving Sessions (4%):

- There will be 2 problem solving sessions: *October 1 – 4, and October 25 – 31.*
- The first part of each workshop will be a problem solving session.
- The final part of each workshop will be a quiz. Quiz answers will be submitted and graded.
- Each workshop is worth 2% of the final grade: 1% for attendance and 1% for quiz result.
- You must notify Dr. Shorlin in writing within 7 days for any absences.
- Workshops will be held in the same room as the labs.

Term tests (30%):

There will be two term tests: Tuesday October 8, 1:00 – 1:50 and Tuesday Nov 4, 1:00 – 1:50. Make sure you can attend those test times.

The tests will be comprised of problems and conceptual questions. Test location is to be announced.

There are normally no makeup tests and you must notify Dr. Shorlin in writing within 7 days for any absences.

Final exam (40%):

The final exam will be written in the period following the last day of lectures.

It will be comprised of problems and conceptual questions and will include material from the entire semester.

You will have 2½ hours to write the final exam.

Wellness and Student Support:

Your wellbeing is important! If you are struggling, come talk to me. There are many resources on campus to support student wellness:

Student Life <http://www.mun.ca/student/>

Academic Support <http://www.mun.ca/currentstudents/academic/>

Student Support <http://www.mun.ca/currentstudents/student/>

Wellness and Counselling <http://www.mun.ca/currentstudents/wellness/>

Accommodations:

Any student requiring physical or academic accommodations or those with other special needs are encouraged to talk to Dr. Shorlin as soon as possible. All conversations will remain confidential.

The Blundon Centre offers an extensive array of services and has developed a comprehensive policy. See www.mun.ca/blundon

Regulations and Details (Don't Ignore!)

- A mark of 50% is required on the lab component of the course in order to pass the course.
- Any student who is absent from a test, lab, or workshop must notify Dr. Shorlin in writing within 7 days of the absence. Valid absences will be excused or opportunity will be given to makeup the missed work.
- A deferred exam will be available to students who miss the final exam with a valid excuse (medical note required).

Information Required for Medical Certificates:

A student who requests permission to drop courses; to withdraw from University studies; to have examinations deferred or to obtain other waivers of University, departmental or course regulations based on health issues is required by the University to provide, in support of the request, a certificate from a health professional in the form of a note or letter. Such certificates must be sufficiently specific to allow a proper consideration of a student's case. The University requires that all such certificates must be on letterhead, must be signed by the health professional, must confirm the specific dates on which the student visited the health professional and should include details on the following:

- the degree to which the health issue is likely to have affected the student's ability to study, attend classes, or sit examinations; the degree to which the illness is likely to have affected the student's ability to study, attend classes, or sit examinations,
- the length of time over which the student's abilities were likely hampered by the condition,
- the fitness of the student to resume studies.

Confidentiality: The University respects the confidentiality of all material contained in medical notes. Physicians are strongly advised to retain a copy of the medical note in case the medical note needs to be verified or reissued at a later date.

Use of Recording Devices in Classrooms

The lectures and displays (and all material) delivered or provided in this course, including any visual or audio recording thereof, are subject to copyright owned by Dr. Shorlin. It is prohibited to record or copy by any means, in any format, openly or surreptitiously, in whole or in part, in the absence of express written permission from Dr. Shorlin any of the lectures or materials provided or published in any form during or from the course.

Important general information from the University.

- **Missed Work:** Students who cannot complete assignments or midterm tests need to speak to the instructor and consult the University Calendar, University Regulations, Section 6.7.5: Exemptions from Parts of the Evaluation:
<http://www.mun.ca/regoff/calendar/sectionNo=REGS-0601#REGS-1949>
- **Student Code of Conduct.** <http://www.mun.ca/student/conduct/>
- **Exemptions From Final Examinations**
<http://www.mun.ca/regoff/calendar/sectionNo=REGS-0628>
- **Academic Misconduct** <http://www.mun.ca/regoff/calendar/sectionNo=REGS-0748>
- **Accommodations for Students with Disabilities**
<http://www.mun.ca/blundon/accommodations/>
- **Last day to drop a course** without academic prejudice is October 30, 2019. See University Diary (<http://www.mun.ca/regoff/calendar/sectionNo=GENINFO-0086>).

*You can always tell a physicist, but you can't tell him much.
-- Anonymous*

PHYSICS 1020

FALL 2019

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
SEP 2	SEP 3	SEP 4 LECTURES BEGIN	SEP 5 SECTIONS 1.1 - 1.8	SEP 6
SEP 9 SECTIONS 2.1 - 2.3	SEP 10 LAB INTRO SECTIONS 2.4, 2.5	SEP 11 LAB INTRO	SEP 12 LAB INTRO SECTION 2.6	SEP 13 LAB INTRO
SEP 16 SECTION 2.7	SEP 17 LAB 1 SECTIONS 3.1, 3.2	SEP 18 LAB 1	SEP 19 LAB 1 SECTION 3.3, 3.4	SEP 20 LAB 1
SEP 23 SECTION 3.5	SEP 24 LAB 2 SECTION 3.6	SEP 25 LAB 2	SEP 26 LAB 2 SECTIONS 4.1, 4.2	SEP 27 LAB 2
SEP 30 SECTIONS 4.3, 4.4	OCT 1 PROBLEM SET 1 SECTION 4.5	OCT 2 PROBLEM SET 1	OCT 3 PROBLEM SET 1 SECTIONS 5.1, 5.2	OCT 4 PROBLEM SET 1
OCT 7 SECTIONS 5.3, 5.4	OCT 8 LAB 3 TERM TEST 1	OCT 9 LAB 3	OCT 10 LAB 3 SECTIONS 5.5, 5.6	OCT 11 LAB 3
OCT 14 BREAK THANKSGIVING DAY	OCT 15 BREAK	OCT 16 FOLLOW MONDAY SCHEDULE LECTURE 16 SECTION 5.7	OCT 17 FOLLOW TUESDAY SCHEDULE LECTURE 17 SECTIONS 6.1, 6.2	OCT 18 LAB 4
OCT 21 SECTIONS 6.3, 6.4	OCT 22 LAB 4 SECTION 6.7	OCT 23 LAB 4	OCT 24 LAB 4 SECTIONS 12.1, 12.2	OCT 25 PROBLEM SET 2
OCT 28 SECTION 11.1	Oct 29 PROBLEM SET 2 SECTION 11.3	OCT 30 LAST DAY TO DROP CLASSES PROBLEM SET 2	OCT 31 PROBLEM SET 2 SECTION 11.4	NOV 1 LAB 5
NOV 4 SECTIONS 7.1, 7.2	NOV 4 LAB 5 TERM TEST 1	NOV 6 LAB 5	NOV 7 LAB 5 SECTIONS 7.3, 7.4	NOV 8 LAB 6
NOV 11 NO LECTURES	NOV 12 LAB 6 SECTIONS 8.1 - 8.3	NOV 13 LAB 6	NOV 14 LAB 6 SECTIONS 8.4, 8.5	NOV 15 FOLLOW MONDAY SCHEDULE SECTIONS 9.1 - 9.3
NOV 18 SECTIONS 9.4 - 9.6	NOV 19 LAB SKILLS TEST SECTIONS 9.7, 9.8	NOV 20 LAB SKILLS TEST	NOV 21 LAB SKILLS TEST SECTIONS 10.1, 10.2	NOV 22 LAB SKILLS TEST
NOV 25 SECTIONS 10.3, 10.4	NOV 26 SECTION 10.5	NOV 27 	Nov 28 SECTION 10.6	Nov 29 LECTURES END