ENGG*2230 Fluid Mechanics

Winter 2018
Section(s): C01,C02

School of Engineering
Credit Weight: 0.50
Version 1.00 - January 05, 2018

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1 Course Details

1.1 Calendar Description

Analysis of steady ideal and viscous fluid flow systems using the Continuity, Bernoulli and Momentum equations. Boundary layer theory is treated in terms of viscous and pressure drag, lift and its importance in heat and mass transfer. Dimensional analysis and dynamic similitude are studied to provide an understanding of flow systems analysis and modeling. Introduction to pipe flow and open channel flow.

Pre-Requisite(s): ENGG*1210, MATH*1210

1.2 Course Description

Engineers have been studying fluid mechanics for many 1000s of years. A deeper understanding of fluid motion opens the door to many applications and other fields of study, including energy, transportation, and environmental protection. The main goals of this course are (1) to teach the student the fundamental concepts and analytical techniques in classical fluid mechanics and (2) to prepare the student for future applications of these tools.

1.3 Timetable

Lectures (Section 01 - Dr. Binns):

Day	Time	Room
Tuesday	11:30AM-12:50PM	ROZH 102
Thursday	11:30AM-12:50PM	ROZH 102

Lectures (Section 02 - Dr. Tasnim):

Day	Time	Room
Tuesday	5:30PM-6:50PM	MCKN 117
Thursday	5:30PM-6:50PM	MCKN 117

Tutorials:

Day	Lab/Tutorial Section	Time	Room
Thursday	1	1:30PM-3:20PM	MCKN 234
Friday	2	9:30AM-11:20AM	ALEX 117
Monday	3	8:30AM-10:20AM	MCKN 238
Wednesday	4	11:30AM-1:20PM	MCKN 233
Tuesday	5	8:30AM-10:20AM	MCKN 238

Laboratories:

Day	Lab/Tutorial Section	Time	Room
Thursday	1	1:30PM-3:20PM	THRN 1125
Friday	2	9:30AM-11:20AM	THRN 1125
Monday	3	8:30AM-10:20AM	THRN 1125
Wednesday	4	11:30AM-1:20PM	THRN 1125
Tuesday	5	8:30AM-10:20AM	THRN 1125

1.4 Final Exam

Monday, April 16, 2018, 11:30AM-1:30PM, room TBA

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2 Instructional Support

2.1 Instructor(s)

Andrew Binns PhD, EIT (Section 01)
Email: binns@uoguelph.ca
Telephone: +1-519-824-4120 x54011
Office: THRN 2414
Office Hours: TBA on CourseLink or by appointment

Syeda Tasnim PhD, EIT (Section 02)
Email: stasnim@uoguelph.ca
Telephone: +1-519-824-4120 x54013
Office: THRN 2413
Office Hours: TBA on CourseLink or by appointment

2.2 Instructional Support Team

Lab Technician: Ryan Smith
Email: rsmith17@uoguelph.ca
Telephone: +1-519-824-4120 x53278
Office: THRN 1114

2.3 Teaching Assistant(s)

Teaching Assistant: Dustin Brown
Email: dbrown24@uoguelph.ca
Office Hours: TBA on CourseLink

Teaching Assistant: Ryan Good
Email: rgood@uoguelph.ca
Office Hours: TBA on CourseLink

Teaching Assistant: Shakirudeen Salaudeen
Email: ssalaude@uoguelph.ca
Office Hours: TBA on CourseLink

Teaching Assistant: Christopher Sullivan
Email: csulli05@uoguelph.ca
Office Hours: TBA on CourseLink

Teaching Assistant: Spencer Walls
Email: swalls@uoguelph.ca
Office Hours: TBA on CourseLink

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3 Learning Resources

3.1 Required Resources(s)

Course Website (Website)
https://courselink.uoguelph.ca/
Course material, news, announcements, and grades will be regularly posted to the ENGG*2230 CourseLink site. You are responsible for checking the site regularly.

Fluid Mechanics (Textbook)
F.M. White, 8th Edition McGraw-Hill, 2015

3.2 Recommended Resources(s)

Engineering Peer Helpers (Voluntary) (Other)
The peer helper program, staffed by upper year engineering students, offers regular workshops aimed at developing problem solving skills and new learning tools specific to core engineering courses such as Fluid Mechanics. The Fluid Mechanics Focused Engineering Problem Solving (FEPS) sessions will be run in **THRN (room TBD)**. The day(s) and times will be announced in class. Contact engpeers@uoguelph.ca or http://www.uoguelph.ca/engineering/peer_helper for more information.

3.3 Additional Resources(s)

Lecture Information (Notes)
Lectures will be presented through a combination of PowerPoint slides and Document Camera notes. The slides for the lectures will be posted on the course website (CourseLink). These slides are augmented with in-class examples. You are thus expected to take notes during class, which includes the examples and supplementary information the professor provides while lecturing. You are recommended to print off partial notes posted to CourseLink prior to each lecture.

Lab Manual (Lab Manual)
The lab manual is available on CourseLink. You are responsible for printing this and having it with you during your laboratory sessions. You must read the laboratory manual to prepare for each experiment prior to your scheduled laboratory.

Problem Sets (Other)
There will be **weekly unmarked** problem sets posted on CourseLink during the term. You are expected to complete each problem set on a timely basis. Most students find that practice problems are the best way to learn the course. The solutions will be posted on CourseLink approximately two weeks after the unmarked problem set is posted.

Tutorials (Other)
There will be 5 tutorials in which cooperative learning exercises will take place. During these tutorials, you will work in groups to solve problems on the white boards in the tutorial rooms. Peer and self evaluations on your problem analysis skills as well as instructor and GTA evaluations on the solution process will be used to determine an individual grade for the cooperative learning exercise. Your best **4 out of 5** grades will be considered for your final grade assessment. Please refer to Section 5.6 and 5.7 for a detailed schedule.

Miscellaneous Information (Other)
Other information related to Fluid Mechanics is also posted on CourseLink.

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4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Describe the physical and flow properties of fluids and their impact on engineered systems and structures.
2. Characterize and analyze fluid mechanics problems through the use of the appropriate tools, including conservation of mass, conservation of momentum, and the conservation of energy, and using the appropriate approaches, including integral (control volume), differential, or dimensional approaches.
3. Estimate head loss, required power, sizing, or flow rates in internal and open flow systems.
4. Estimate lift and drag forces on submerged bodies.
5. Model fluid engineering problems, with stated assumptions, and solve them systematically with clearly communicated solutions complete with correct accuracy, precision, significant digits, and dimensional homogeneity.
6. Use appropriate apparatus, sensors and instruments to collect data and analyze fluid flow by conducting laboratory and computational tests.
7. Write clear, concise and professional laboratory reports for the biweekly fluid mechanics.

8. Demonstrate effective skills in teamwork during group activities (seminars and biweekly laboratories) and respectful interactions with peers, lab technicians, graduate teaching assistants, and instructor during lectures, weekly seminars and biweekly laboratories.

4.2 Engineers Canada - Graduate Attributes

Successfully completing this course will contribute to the following:

#	Outcome Set Name	Course Learning Outcome
1	Knowledge base	1, 2, 3, 4
1.1	Recall, describe and apply fundamental mathematical principles and concepts	1, 2, 3, 4
1.2	Recall, describe and apply fundamental concepts and principles in natural sciences	1, 2, 3, 4
1.3	Comprehend and apply fundamental engineering concepts	1, 2, 3, 4
1.4	Comprehend and apply program-specific engineering concepts	1, 2, 3, 4
2	Problem analysis	2, 5
2.1	Formulate a problem statement in engineering and nonengineering terminology	2, 5
2.2	Construct a conceptual framework	2, 5
2.3	Identify, organize and justify appropriate information	2, 5
2.4	Execute an engineering solution	2, 5
2.5	Critique and appraise results	2, 5
3	Investigation	6
3.1	Propose and test working hypotheses	6
3.2	Design and apply an investigation plan	6
3.3	Analyze and interpret experimental data	6
3.4	Assess validity of conclusions within limitations of data and methodologies	6
5	Use of engineering tools	6
5.1	Select appropriate engineering tools from various alternatives	6
5.2	Apply selected engineering tools	6
5.3	Recognize limitations of selected engineering tools	6
6	Individual and team work	8
6.1	Act as an individual team member to promote team success	8

#	Outcome Set Name	Course Learning Outcome
6.2	Demonstrate leadership through team building, providing feedback and positive attitude	8
7	Communication skills	7
7.1	Develop and deliver clear, key concepts using methods appropriate for the intended audience	7
7.2	Critically evaluate received information	7
7.3	Demonstrate active listening and follow instructions	7

5 Teaching and Learning Activities

5.1 Lecture

Week 1
Topic(s): Fluids and fluid properties
Reference(s): Chapter 1

Weeks 2-4
Topic(s): Fluid statics and pressure distribution
Reference(s): Chapter 2

Weeks 4-6
Topic(s): Fluid flow concepts: control volumes
Reference(s): Chapter 3

Weeks 6-7
Topic(s): Fluid flow concepts: differential analysis
Reference(s): Chapter 4

Weeks 7-8
Topic(s): Dimensional analysis
Reference(s): Chapter 5

Weeks 8-9
Topic(s): Internal viscous flow (pipe flow)
Reference(s): Chapter 6

Week 10
Topic(s): External flow and boundary layer theory
Reference(s): Chapter 7

Week 11
Topic(s): Pumps and turbomachinery
Reference(s): Chapter 11

Week 12
Topic(s): Open channel flow
Reference(s): Chapter 10

5.2 Laboratories

The labs and tutorials will be conducted in alternating weeks during the same two-hour time blocks (labs in THRN 1125 and tutorials in the assigned rooms). **Everyone must attend your scheduled lab during the week of January 8-12, 2018 (THRN 1125).** During this lab time, students will be familiarized with the Fluids Lab and the required safety procedures. In addition, the sections will be divided into two groups of students of approximately equal size (designated as “A” and “B” groups). This A and B group designation will indicate which weeks you have a lab and which weeks you have a tutorial as per the schedule given below. Also during the first lab meeting, you will be able to sign up with your lab teams. Labs will be done in teams of three students during your scheduled lab time. There will also be sign-up sheets posted on the wall outside of the Fluids Lab (THRN 1125).

For labs, each student must have read and understood the corresponding information in the lab manual (available on CourseLink) and must have watched the corresponding video (also available on CourseLink). You are expected to do the intermediate calculations and, in some cases, all of the calculations before leaving the lab.

5.3 Laboratory Activities

Lab activitiy	Topic
0	Intro to the fluids lab and lab safety
1	Flow measurement
2	Impact of a jet
3	Pipe friction
4	Minor losses
5	Discharge over weirs

5.4 Lab Report Submssions

The lab reports are to be submitted electronically in drop boxes in CourseLink that will be created based on your lab teams. The due date will be one week after you perform the laboratory at 11:59 pm.

Each lab report is to include a scanned version of the raw data sheet used to record the data while doing the experiment. This sheet is to be signed and dated by either the lab technician or the GTA before you leave the lab.

Each group must submit a single electronic report for each experiment. The report is to be no longer than 10 pages, which includes the title page and signed data sheet (that is, one page for the title page, one page for the signed data sheet and up to 8 pages for the rest of the work). Additional report information is in the laboratory manual.

If you miss a laboratory **due to grounds for granting academic consideration** or **religious accommodation**, arrangements must be made with the teaching assistant to complete a makeup lab during open lab days.

5.5 Tutorials

Your weekly tutorials will cover background material and problem sets not covered in lectures.

Typical tutorial involve solving problems by the GTA and/or instructor. **In every tutorial, at least 50 minutes will be allocated for solving problems (one or two problems) by the students which will be marked. For solving the problems, students will work in groups of three students. You may stick to your lab group for this exercise or form new groups.** You must attend your registered section for tutorial.

5.6 Tutorial Activities

Tutorial activity	Topic
1	Fluid properties and fluid statics
2	Buoyancy
3	Conservation of momentum, Bernoulli equation, conservation of energy
4	Dimensional analysis and pipe flow
5	Pumps

5.7 Laboratory and Tutorial Schedules

Dates	Monday	Tuesday	Wednesday	Thursday	Friday
Jan. 8-12	**Sec. 03** Lab Activity 0 (Groups A & B)	**Sec. 05** Lab Activity 0 (Groups A & B)	**Sec. 04** Lab Activity 0 (Groups A & B)	**Sec. 01** Lab Activity 0 (Groups A & B)	**Sec. 02** Lab Activity 0 (Groups A & B)
Jan. 15-19	**Sec. 03** Group A - Lab #1 Group B - Tut #1	**Sec. 05** Group A - Lab #1 Group B - Tut #1	**Sec. 04** Group A - Lab #1 Group B - Tut #1	**Sec. 01** Group A - Lab #1 Group B - Tut #1	**Sec. 02** Group A - Lab #1 Group B - Tut #1
Jan. 22-26	**Sec. 03** Group A - Tut #1 Group B - Lab #1	**Sec. 05** Group A - Tut #1 Group B - Lab #1	**Sec. 04** Group A - Tut #1 Group B - Lab #1	**Sec. 01** Group A - Tut #1 Group B - Lab #1	**Sec. 02** Group A - Tut #1 Group B - Lab #1
Jan.	**Sec. 03**	**Sec. 05**	**Sec. 04**	**Sec. 01**	**Sec. 02**

29-Feb. 02	Group A - Lab #2 Group B - Tut #2	Group A - Lab #2 Group B - Tut #2	Group A - Lab #2 Group B - Tut #2	Group A - Lab #2 Group B - Tut #2	Group A - Lab #2 Group B - Tut #2
Feb. 05-09	**Sec. 03** Group A - Tut #2 Group B - Lab #2	**Sec. 05** Group A - Tut #2 Group B - Lab #2	**Sec. 04** Group A - Tut #2 Group B - Lab #2	**Sec. 01** Group A - Tut #2 Group B - Lab #2	**Sec. 02** Group A - Tut #2 Group B - Lab #2
Feb. 12-16	**Sec. 03** Group A - Lab #3 Group B - Tut #3	**Sec. 05** Group A - Lab #3 Group B - Tut #3	**Sec. 04** Group A - Lab #3 Group B - Tut #3	**Sec. 01** Group A - Lab #3 Group B - Tut #3	**Sec. 02** Group A - Lab #3 Group B - Tut #3
Feb. 19-23	**Winter break - no classes, laboratories or tutorials**				
Feb. 26-Mar. 02	**Sec. 03** Group A - Tut #3 Group B - Lab #3	**Sec. 05** Group A - Tut #3 Group B - Lab #3	**Sec. 04** Group A - Tut #3 Group B - Lab #3	**Sec. 01** Group A - Tut #3 Group B - Lab #3	**Sec. 02** Group A - Tut #3 Group B - Lab #3
Mar. 05-09	**Sec. 03** Group A - Lab #4 Group B - Tut #4	**Sec. 05** Group A - Lab #4 Group B - Tut #4	**Sec. 04** Group A - Lab #4 Group B - Tut #4	**Sec. 01** Group A - Lab #4 Group B - Tut #4	**Sec. 02** Group A - Lab #4 Group B - Tut #4
Mar. 12-16	**Sec. 03** Group A - Tut #4 Group B -	**Sec. 05** Group A - Tut #4 Group B -	**Sec. 04** Group A - Tut #4 Group B - Lab	**Sec. 01** Group A - Tut #4 Group B -	**Sec. 02** Group A - Tut #4 Group B - Lab #4

	Lab #4	Lab #4	#4	Lab #4	
Mar. 19-23	**Sec. 03** Group A - Lab #5 Group B - Tut #5	**Sec. 05** Group A - Lab #5 Group B - Tut #5	**Sec. 04** Group A - Lab #5 Group B - Tut #5	**Sec. 01** Group A - Lab #5 Group B - Tut #5	**Sec. 02** Group A - Lab #5 Group B - Tut #5
Mar. 26-30	**Sec. 03** Group A - Tut #5 Group B - Lab #5	**Sec. 05** Group A - Tut #5 Group B - Lab #5	**Sec. 04** Group A - Tut #5 Group B - Lab #5	**Sec. 01** Group A - Tut #5 Group B - Lab #5	Holiday - rescheduled to Apr. 06, 2018
Apr. 02-06	Open lab day for make-up labs	Open lab day for make-up labs	Open lab day for make-up labs	Open lab day for make-up labs	**Sec. 02** Group A - Tut #5 Group B - Lab #5

Note: It is critical that you sign up in a slot during your scheduled lab time. Pick your lab group wisely, because you will work with the same lab group during the whole semester.

5.8 Note

Students are responsible for all information presented in the class, tutorials, and labs and student participation is encouraged. The dynamics of each learning activity should be based on professionalism and mutual respect. Cell phones are to be turned off during the class, ear buds are to be put away, and the use of laptops and tablets in class is restricted to taking class notes. Everyone in the classroom has the right to participate and contribute.

5.9 Other Important Dates

Monday, January 08, 2018: first day of class
Friday, March 09, 2018: drop date – 40th class
Monday, February 19, 2018 to Friday, February 23, 2018: winter break - no classes scheduled
Friday, March 30, 2018: holiday - no classes scheduled
Friday, April 06, 2018: last day of class

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6 Assessments

6.1 Marking Schemes & Distributions

Assessment of your final grade will be evaluated against two different assessment scheme as described in the table below with your **final grade assigned being the maximum calculated by the two schemes**. Scheme B allows students who performed poorly on the midterm to diminish the weight of the midterm by putting more weight on the final exam.

Name	Scheme A (%)	Scheme B (%)
Problem sets (unmarked)	0.00	0.00
Labs	15.00	15.00
Cooperative learning exercises (tutorials)	10.00	10.00
Midterm exam	30.00	15.00
Final exam	45.00	60.00
Total	100.00	100.00

6.2 Assessment Details

Unmarked Problem Sets (0.00%)
Weekly problem sets to be posted weekly on CourseLink.

Labs (15.00%)
See Section 5.2, 5.3 and 5.7 for the lab schedule and information and Section 5.4 for lab submission guidelines. No grades will be issued to any group member who is not in attendance when the group completes the lab.

Tutorial Cooperative Learning Exercises (10.00%)
4 out of 5 exercises will be considered for the final grade assessment of this component. See Section 5.7 for schedule of dates.

Midterm Exam (30.00%)
Date: Saturady, March 03, 2018, 1:00-2:30pm, room TBA
Note: midterm exam worth 15% for Scheme B

Final Exam (45.00%)
Date: Monday, April 16, 2018, 11:30AM-1:30PM, room TBA
Note: final exam worth 60% for Scheme B

6.3 Exams

The midterm and final exams will be closed book tests. Necessary equations and information will be provided or announced prior to each exam. Calculators are permitted, but they must be non-communicating devices.

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7 Course Statements

7.1 Communication and Email Policy

Please use lectures, labs, and seminar sessions as your main opportunity to ask questions about the course. It is your responsibility to check the course website regularly for announcements. Electronic communication should be limited to the course forum. However, topics of a personal and confidential nature should be emailed to the instructor. Please note that all email communication must be made through your university email account

(<username>@uoguelph.ca).

7.2 Course Grading Policies

Missed Assessments: If you are unable to meet an in-course requirement due to medical, psychological, or compassionate reasons, please email the course instructor. 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

Accommodation of Religious Obligations: If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements. See the undergraduate calendar for information on regulations and procedures for Academic Accommodation of Religious Obligations:
http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-accomrelig.shtml

Passing Grade: In order to pass the course, you must obtain a final grade of 50% or higher. If you fail (<50%) **both** the midterm and final exams, you will receive a failing grade in the course and only the exams will be used to calculate your final mark. That is, your final mark will be the average of your midterm and final exam marks.

Mark Adjustments: If you have questions about any grade during the semester, you must inquire within one week of the mark being received or posted on CourseLink (whichever comes first).

Missed Midterm Exam: If you miss the midterm due to grounds for granting academic consideration or religious accommodation, the weight of the missed assessment will be added to the final exam. There will be no make-up midterm exam.

Lab Work: You must attend and complete all laboratories. If you miss a laboratory due to grounds for granting academic consideration or religious accommodation, arrangements must be made with the teaching assistant to complete a make-up lab (i.e., during open lab days).

7.3 Relationships with other Courses & Labs

Previous Courses:

ENGG*1210: Mechanical system fundamentals such as force, torques, friction, moments, free body diagrams, equilibrium, centroids
MATH*1210: Limits, differentiation, integration, series expansion

Follow-on Courses:

ENGG*2660 & ENGG*3160: Fluid, energy flows in biological systems
ENGG*3180: Transport, diffusion, boundary layers in atmospheric air
ENGG*3260: Foundations of energy balances, thermal flow, thermal properties of fluids
ENGG*3370: Applications of fluid flow for power generation, refrigeration, propulsion, pumps, heating and cooling
ENGG*3430: Heat and mass transfer through fluid flow (convection), thermal fluid properties, heat exchangers
ENGG*3470: Mass transfer through fluid flows (convection), thermal fluid properties
ENGG*3590: Fluid mechanics in water treatment applications
ENGG*3650: Natural water movement, mass and energy flows
ENGG*3670: Soil/water interaction

ENGG*3830: Fluid mechanics in mixing and processing of biological products
ENGG*4250: Open channel hydraulics and design of hydraulic structures

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8 School of Engineering Statements

8.1 Instructor's Role and Responsibility to Students

The instructor’s role is to develop and deliver course material in ways that facilitate learning for a variety of students. Selected lecture notes will be made available to students on Courselink but these are not intended to be stand-alone course notes. Some written lecture notes will be presented only in class. During lectures, the instructor will expand and explain the content of notes and provide example problems that supplement posted notes. Scheduled classes will be the principal venue to provide information and feedback for tests and labs.

8.2 Students' Learning Responsibilities

Students are expected to take advantage of the learning opportunities provided during lectures and lab sessions. Students, especially those having difficulty with the course content, should also make use of other resources recommended by the instructor. Students who do (or may) fall behind due to illness, work, or extra-curricular activities are advised to keep the instructor informed. This will allow the instructor to recommend extra resources in a timely manner and/or provide consideration if appropriate.

8.3 Lab Safety

Safety is critically important to the School and is the responsibility of all members of the School: faculty, staff and students. As a student in a lab course you are responsible for taking all reasonable safety precautions and following the lab safety rules specific to the lab you are working in. In addition, you are responsible for reporting all safety issues to the laboratory supervisor, GTA or faculty responsible.

You must familiarize yourself with the lab equipment by reading the manual and watching the accompanying video prior to your lab, in addition to attending the safety orientation during the first lab session (week 1). There is to be no food or drinks from outside in the Fluids Lab. Pay special attention to the labs rules for appropriate attire.

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9 University Statements

9.1 Email Communication

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

9.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The regulations and procedures for Academic Consideration are detailed in the Undergraduate Calendar.

9.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for Dropping Courses are available in the Undergraduate Calendar.

9.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

9.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required, however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance, and not later than the 40th Class Day.

More information: www.uoguelph.ca/sas

9.6 Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. 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.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar.

9.7 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.

9.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

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