# UNIVERSITY OF WINDSOR DEPARTMENT OF MATHEMATICS AND STATISTICS Fall 2020

#### **Probability (STAT3920-1)**

**Instructor:** Dr. S. Nkurunziza, Ext. 3017, Office 9-101 Lambton Tower

Email: severien@uwindsor.ca

**Lecture:** Monday and Wednesday 10:00 am - 11:20 am (on line)

The lecture notes will be sent electronically through Blackboard. Further,

the lectures will be delivered during scheduled lecture times via Blackboard.

**Individual help:** By Email "severien@uwindsor.ca"

Web information: https://blackboard.uwindsor.ca

**Text:** *Introduction to mathematical statistics, Hogg and Craig.* 

**Prerequisite:** Introduction to statistics (STAT-2950 or 65-251)

**Course outline:** Axioms of theory of probability. Discrete and continuous distributions (binomial, Poisson, exponential, normal chi-square, gamma, t, and F distributions...). Multivariate distributions, conditional distributions, independence, expectation, moment generating functions, characteristic functions, transformation of random variables, order statistics, law of large numbers, central limit theorem.

**Grade:** The following are the weights assigned for determination of the raw

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Assignments	30%	NA
Term Test I	20%	Friday, Oct. 9, 2020; 7:00-9:00 pm
Term Test II	20%	Friday, Nov. 13, 2020; 7:00-9:00 pm
Final Exam	30%	TBA

The **midterms** will be take-homes and thus they are open book exams. From 9:00 pm, you will be will be allowed at most 30 min to send electronically your copies. The **final Exam** will be a take-home and thus, it is an open book exam. The exam period is three hours with a due date which corresponds to the exam slot posted by the University. After the three hours of the exam, you will be allowed at most 30 min to send electronically your copy. The instructions about the final exam are as follows:

- 1. The nature of an open book exam allows us to ask more comprehensive questions than might appear on a regular examination. For example, rather than ask questions that depend on having memorized a formula, since you have the formula at hand, we can ask questions about the use of the formula, the derivation of the formula, etc. When you prepare for the exam, please prepare with this in mind.
- 2. Please note you MUST NOT communicate with any another person while you are writing the exam. As with all examinations, we expect students to uphold the <u>Code of Conduct</u>. See <u>Student Code of Conduct (Academic Integrity) at "http://www.uwindsor.ca/aauheads/resources/academic-integrity-student-conduct.html"</u>.

- **NOTE 1:** The last day to withdraw voluntarily from class is November 18, 2020. After this date, students remain registered in this course will receive final grade as appropriate.
- **NOTE 2:** From September 2013, the University of Windsor uses a percentage marking and grading scale.

The following are the university-wide grade descriptors for undergraduate and graduate programs and will be printed on the back of the transcripts.

#### **Undergraduate - University-wide grade descriptors:**

Letter Grade	Percentage (%) Range
A+	90-100
A	85-89.9
A-	80-84.9
B+	77-79.9
В	73-76.9
B-	70-72.9
C+	67-69.9
C	63-66.9
C-	60-62.9
D+	57-59.9
D	53-56.9
D-	50-52.9
F	0-49.9

In computing a student's average, grades between 0% and 22% are recorded as is on the transcript but will be calculated into the student's average as 22%. Grades between 23% and 40% are recorded as is on the transcript but will be calculated into the student's average as 40%. Grades between 40% to 49% will be recorded as is on the student's transcript and calculated as is into the student's average.

**Graduate - University-wide grade descriptors:** 

Letter Grade	Percentage (%) Range
A+	90-100
A	85-89.9
A-	80-84.9
B+	77-79.9
В	73-76.9
B-	70-72.9
C+	67-69.9
C	63-66.9
C-	60-62.9
F	0-59.9
A+, A, A-	Excellent
B+, B, B-	Good
C+, C, C-	Fair
D+, D, D-	Pass
F	No Credit
IN	Incomplete
IP	In Progress
NR	No Report
P or NP	Pass or Non-Pass

# Department of Mathematics and Statistics Course Outline Companion Fall 2020

**Purpose:** This document contains the common elements required by Senate to be included on course outlines. It includes only non-course specific information.

# Calendar

Thursday September 10, 2020	First Day of Classes
Wednesday September 23, 2020	Last day for late registration and change of courses
Monday October 5, 2020	Full tuition refund drop date. Any courses dropped after this date will be charged 100% of the base tuition charges (0% refund). It is also the final date to Opt-out of incidental charges. After this date incidental charges cannot be reversed.
Thursday October 15, 2020	Expected date for the announcement of the final examination schedule. It is your responsibility to be available for the final examinations. Do not make travel plans to leave Windsor until you have seen your final exam schedule.
Saturday October 10 –	Reading Week. The University offices are closed on Thanksgiving
Sunday October 18, 2020	Day, Monday October 12.
Friday, October 9, 2020 (end of 4 <sup>th</sup> week of classes)	Deadline to apply to the Office of the Registrar for an alternative exam date for students unable to write during the regularly scheduled time slot due to a conflict arising from a religious observance.
October 31, 2020	Deadline to apply for an alternate final examination due to having three or more final examinations scheduled in consecutive time slots over a 24-hour period or three or more final examinations scheduled in one calendar day.
Wednesday November 18, 2020	Last day to voluntarily withdraw (VW) from Fall 2020 classes.
Wednesday December 9, 2020	Last day of Classes
December 11 – 22, 2020	Fall 2020 Final Examination Period.
Wednesday December 23, 2020	Alternation Final Examination Day. If you missed the final examination for a valid reason, approved by your professor, you will write the final examination on this date.

**Student Evaluation of Teaching:** The Student Evaluation of Teaching (SET) forms will be administered in the last two weeks of classes.

**Academic Integrity:** The University of Windsor's <u>Student Code of Conduct (Academic Integrity)</u> will be enforced. Violations will be dealt with according to <u>Senate Bylaw 31</u>. Our practice is to seek the maximum penalty for academic misconduct.

**Medical Certificate:** If you miss a term test or final examination for a valid medical reason you must have an appropriate licensed medical professional complete the form provided by the <u>Senate Policy on Acceptance of Medical Notes from Regulated Health Care</u> Professionals and give this to your course instructor.

Accommodation: Students seeking academic accommodation for an ongoing, diagnosed disability (whether permanent or temporary) must begin the process by completing the Student Accessibility Services Online Intake Form. Once this is done, you will be contacted to arrange a meeting with an Advisor. See the webpages at <a href="http://www.uwindsor.ca/studentaccessibility/">http://www.uwindsor.ca/studentaccessibility/</a> to see the full range of programs and services available. Student Accommodation is governed by the <a href="Policy on Academic Accommodation for Students with Disabilities">Policy on Academic Accommodation for Students with Disabilities</a>

**Student Mental Health Resources:** The University of Windsor is committed to fostering a thriving University community that actively promotes mental well-being and supports students to flourish in both their personal and academic lives. For more on mental health and wellness resources at the University of Windsor visit the website at this <u>link</u>. For Therapy Assistance Online (TAO) visit the web site at this <u>link</u>.

**Grading Scale:** The University of Windsor uses a percentage marking and grading scale. Course instructors are to assign and record integer-valued grades, and these grades are to be considered the exact assigned grades earned by the students.

**University Bylaws and Policies:** Professors, Students, and staff are governed by the University's bylaws and policies. They can be found at the web page at this <u>link</u>. Of concern are those policies and bylaws that govern courses.

- 1. Policy on Academic Accommodation for Students with Disabilities
- 2. Policy on Acceptance of Medical Notes from Regulated Health Care Professionals
- 3. Policy on Conduct of Exams and Tests
- 4. Policy on Grading and Calculation of Averages
- 5. Policy on Student Code of Conduct
- 6. Policy on Student Evaluations of Teaching (SET) and Mandatory Administration of SET
- 7. Policy on Undergraduate Course Overload
- 8. <u>Bylaw 32 Procedural Irregularities and Discrimination Regarding Academic Instruction, Academic Evaluation and Academic Grade Appeals</u>
- 9. Bylaw 54 Undergraduate Academic Evaluation Procedures
- 10. Bylaw 55 Graduate Academic Evaluation Procedures