

Syllabus Math 10120 Fall 2020

Class Time/Location:

Section	Instructor	Time	Location
01	Juan Migliore	MWF 1:00 - 1:50 p.m.	DBRT 126
02	Jacob Landgraf	MWF 10:25 - 11:15	DBRT 136

Websites for each section:

Section	URL
01	http://www3.nd.edu/~jmiglior/M10120F20.html
02	http://jacoblandgraf.com/mth10120fs20/mth10120fs20.html

Instructor Information

Instructor	Office	Phone	email	Office Hours (*)	Class key (for WebAssign)
Juan Migliore	HAYE 236	631-7345	migliore.1@nd.edu	TBA	cengage 0788 2710
Jacob Landgraf	HAYE B20	631-9603	jlandgr1@nd.edu	TBA	nd 7350 1377

(*) Office hours will be held in the zoom room for your section (see below) and the hours will be determined after the first day of class.

TA information

TA	email
Mariko Jurcsak	mjurcsak@nd.edu
Madison Syufy	msyufy@nd.edu

Text: Finite Mathematics, 8th Edition, Rolf (Hybrid Edition with access to online homework).

Alternatively: You may buy an access code to the online homework system. This system includes an online copy of the book. Check out the information on the website – either way, buying an access code for the online homework (WebAssign) is essential.

Considerations in view of the Coronavirus pandemic

The following are some points to keep in mind (mildly edited from the university guidelines):

1. *Health and Safety Protocols*

In this class, as elsewhere on campus, students must comply with all University health and safety protocols, including:

- Face masks that completely cover the nose and mouth will be worn by all students and instructors. This includes in the classroom and the process of entering and exiting the building and classroom.
- Physical distancing will be maintained in all instructional spaces.
- Students will sit in assigned seats throughout the semester, which will be documented by faculty for purposes of any needed contact tracing. Below we will return to this topic.
- Protocols for staged entry to and exit from classrooms and instructional spaces will be followed. Please wait until you are instructed to enter or leave the room. The university has changed the standard times of MWF classes, so there is plenty of time to arrive from your previous class and time to get to your next class.

We are part of a community of learning in which compassionate care for one another is part of our spiritual and social charter. Consequently, compliance with these protocols is an expectation for everyone enrolled

in this course. If a student refuses to comply with the University's health and safety protocols, the student must leave the classroom and will earn an unexcused absence for the class period. Persistent deviation from expected health and safety guidelines may be considered a violation of the University's "Standards of Conduct," as articulated in du Lac: A Guide for Student Life, and will be referred accordingly.

2. *Health Checks and Attendance*

Every morning, members of the Notre Dame Community will be asked to complete a daily health check and submit their information via the Return to Campus Advisor application. The health check application will indicate one of the following:

- (a) Student is cleared for class and should attend class in person; or
- (b) Student is advised to stay home to monitor symptoms and should participate in class virtually and complete all assignments and assessments; or
- (c) Student must consult a healthcare provider and should contact University Health Services (UHS) for an assessment. In the meantime, the student should participate in class virtually and complete all assignments and assessments. Depending on the medical assessment, UHS will follow the the University's standard protocol for obtaining an excused absence for medical reasons.

3. *The hybrid model*

From day one we will be in the hybrid format (see below) so that if you are told not to come to class for health reasons, you can be sure that the zoom room will be operating. But remember that the reason we are hybrid and not entirely online is that part of the class dynamic is lost if you are not there in person.

- (a) Unless conditions force a change, the instructor will teach every class in person.

Students are encouraged to attend class in person, subject to university rules and guidelines, and health considerations. Attending in person will make it easier to ask questions of the instructor, facilitate communication, and will create a more normal class environment.

Students who cannot attend in person will be able to watch the lecture live via zoom, and will also have access to the notes (pdf) and to a video of the lecture (mp4). A recurring zoom room has been established. The link for section 01 is

<https://notredame.zoom.us/j/99182172871?pwd=V3Nxbk8xRHZEZnp2bE1ST0ZrS1BuZz09>

and there is no password (this could change). The link for section 02 is

<https://notredame.zoom.us/j/93281974355?pwd=d3V2bnNrSTNtVm4zejVoRmxCUyt3QT09>

and there is no password (this could change).

Rather than using the blackboard for the lecture, the instructor will write (live) on an iPad which will be projected on a screen in the classroom and also carried live in the zoom room. Students attending virtually will be encouraged to ask questions remotely. We will discuss procedures in the first meeting of the class.

- (b) We request that students who are physically in the classroom **not** log into the zoom class during class time, in order to avoid putting pressure on the wifi system. The pdf notes and video of the lecture will be available on your section's webpage.
- (c) There will be a total of eight hours a week of TA help. This will also be conducted through zoom. The link to the zoom room is

<https://notredame.zoom.us/j/98199137950?pwd=LOV0dWxpakwydEo0MmtNZUsrM1cWdz09>

and the schedule and more details are provided below (see “Additional Help”).

- (d) Office hours will be held in the zoom classroom for your section (the same link as for the lectures). There will be no in-person office hours.
- (e) If conditions force the university to close down in-person classes, this structure will allow us to continue with very little disruption.

EXAMS Three 50-minute exams and one final exam will be given during the semester, in class.

		Exam 1	Exam 2	Exam 3	Final Exam
Date		Wed. Sept. 2	Wed. Sept. 30	Wed. Nov. 4	TBA
Points		100	100	100	150
Room	Sect. 01	DBRT 126	DBRT 126	DBRT 126	TBA
	Sect. 02	DBRT 136	DBRT 136	DBRT 136	TBA

The Final Exam will be comprehensive. A review session will be held before each exam.

QUIZZES (50 Points) Six quizzes will be given in class throughout the semester. Your lowest quiz score will be dropped. There will be no make-up quizzes. Please see the class day-by-day schedule or the link on the website for quiz dates. For students who have been given permission by the university to attend virtually, provisions will be made.

HOMEWORK (100 points): Homework will be done on WebAssign. The first two online homeworks will not count towards your homework grade, in order to give you time to familiarize yourself with the system. You will need to purchase an access code before registering for online homework. Please read the information on our website about book options before you make your purchase. Once you have the access code, you are encouraged to register and complete homeworks 1 and 2 as soon as possible.

Here are the Class Keys (to access the homework on WebAssign) for the two sections:

Section	Class Key
01	cengage 0788 2710
02	nd 7350 1377

GRADES A total of 600 points will be distributed as follows:

HW 100/600 (16.67%) Quizzes : 10 points each, 50/600 (8.33%)
 Exams 1-3, 100 points each, 300/600 (50%) Final Exam, 150/600 (25%).

EXAM REVIEWS A zoom review session will be conducted before each exam other than the final. Details are given on our webpage. They will be in the same zoom address as the help sessions (see below).

ADDITIONAL HELP: Help is available from a number of sources. Details can be found on the website, but these sources include:

1. Office Hours (see above),
2. Help buttons on online homework,
3. Freshman Learning Center,
4. TA help sessions [not mandatory] (see below),
5. Email your instructor or one of the TAs.
6. Math help room
7. Review sessions before exams (TBA).

TA Help Sessions			
Day	Time	TA	Location
Sunday	7:00 - 9:00 PM	Mariko Jurcsak	(*)
Monday	7:00 - 9:00 PM	Madison Syufy	(*)
Wednesday	7:00 - 9:00 PM	Mariko Jurcsak	(*)
Thursday	7:00 - 9:00 PM	Madison Syufy	(*)

(*) The help sessions are all in the following zoom room

<https://notredame.zoom.us/j/98199137950?pwd=L0V0dWxpakwydEo0MmtNZUsrMlcwdz09>

The TA will be available at this zoom room for the entire two hours. You are welcome to go there at any time during those two hours to ask questions about the homework or questions that arose in class. No appointment is needed.

HOMEWORK POLICY: You will find a complete list of **electronic homework** due dates at the end of this document. Note **ALL DEADLINES ARE AT 2:00 A.M. ON THE DUE DATE**. Effectively this means that the homework is due on the previous night with 2 hours grace. The first three electronic homework assignments are due on August 18, 2020, at 2:00 a.m. and the next one is due on August 19 at 2:00 a.m. You are expected to get started on this homework well before that date so that you can iron out any problems you might have with the system on time.

The availability and due dates of all homework allow ample time for completion. Submission of homework can be carried out with any internet connection at any time. Therefore **late homework will not be accepted**. It is expected that you will start your homework well before the time at which it is due and that if you have to be out of town, you will plan ahead appropriately. In the case of extenuating circumstances, you should get a note from the dean of First Year of Studies or your advisor in order to get credit. Poor time management, a lapse of memory about the 2:00 a.m. deadline for online homework, or a prearranged trip off campus, for any event, will not be considered as extenuating circumstances. If your computer is not working, please use one of the many computers available on campus. The online system keeps a complete record of the time you spend online and automatically saves your work. If you are having any trouble with the system mysteriously not giving you credit for your work, please print out your completed work as you do your homework and bring it to class, show it to your instructor in person, and they will give you credit.

MAKE-UP EXAMS Please check the exam dates. [The exams will be conducted in class, and all three are on Wednesdays. Do not make travel plans conflicting with any exam date! If you are one of the \(few\) students who have made arrangements with the university to take the course online, please contact me as soon as you can.](#) Obviously if the university closes the campus because of the pandemic, we will modify this. In the event that you miss an exam, a note from your advisor or a dean from First Year of Studies will be required in order to gain credit for the make-up exam.

Please contact your instructor as soon as possible if you miss an exam.

Exam Conflicts: Exam conflicts are governed by the **undergraduate academic code**. According to section 3.2.2.3, students with 3 or more finals in one day, or 4 or more finals in a 24 hour period, may negotiate to change the time of one of these finals. If you intend to request to have the time of your Math 10120 final changed, you must talk to your dean (or the dean's designee) at least one week before the start of the final exam period (see section 3.2.2.4 of the undergraduate academic code). You must also contact your dean to resolve exam conflicts during semester.

HONOR CODE: Examinations, quizzes and homework are conducted under the **Notre Dame Honor Code** (see <https://honorcode.nd.edu/>). While discussion in small groups in doing homework is permitted (and strongly encouraged) in this course, the work should be your own. Letting someone log in in your name and do your online homework is a violation of the honor code. Exams are closed book and are to be done completely by yourself with no help from others.

You will not be allowed to collaborate on exams or quizzes.

Calculators will be allowed for exams.

CHANCE and STRATEGY: This course is designed to help students explore the everyday notions of chance and strategy through the language and methods of mathematics. We bring clarity and precision to our use of these concepts through the language and tools of mathematics. By understanding these basic concepts fully, the student should build confidence in their ability to analyze chances and strategies in everyday life.

The main topics covered in the course are counting, probability and a little basic statistics, linear programming and some game theory. A detailed syllabus and homework schedule appears on the next page, and more information appears on the website.

Schedule Math 10120 Spring 2020

Note exams and in-class quizzes in boldface! Also, assignments are due by 2AM so essentially the due date is one day earlier.

Date	Day	Sect.	Topic	HW due
–	–	–	Learning WebAssign.	08/18 2AM
08/10	Mon.	6.1	Sets.	08/18 2AM
08/12	Wed.	6.2	Counting elements of a set with Venn diagrams, and inclusion-exclusion principle.	08/18 2AM
08/14	Fri.	6.3	Basic Counting principles including Multiplication Principle.	08/19 2AM
08/17	Mon.	6.4	Permutations.	08/21 2AM
08/19	Wed.	6.5	Combinations.	08/26 2AM
08/21	Fri.	6.5/6.6	Combinations/Mix of counting probs. Quiz 1	08/28 2AM (§6.6)
08/24	Mon.	6.6	A mixture of counting problems.	–
08/26	Wed.	6.7	Partitions.	08/31 2AM
08/28	Fri.	7.1	Introduction to Probability. Quiz 2	09/09 2AM
08/31	Mon.		Review for Exam 1.	–
09/02	Wed.		Exam 1, in class	–
09/04	Fri.	7.1/7.2	Probability and equally likely outcomes.	09/11 2AM (§7.2)
09/07	Mon.	7.2	Equally likely outcomes.	–
09/09	Wed.	7.3	Compound Events, Union, Intersections and Complements.	09/14 2AM
09/11	Fri.	7.4	Conditional Probability. Quiz 3	09/18 2AM
09/14	Mon.	7.4/7.5	Conditional Probability and Independence.	09/21 2AM (§7.5)
09/16	Wed.	7.5	Independence.	–
09/18	Fri.	7.6	Bayes Theorem. Quiz 4	09/23 2AM
09/21	Mon.	8.1	Frequency Distributions.	09/25 2AM
09/23	Wed.	8.2	Measures of Central Tendency.	09/28 2AM
09/25	Fri.		Catch up.	–
09/28	Mon.		Review for Exam 2.	–
09/30	Wed.		Exam 2, in class.	–
10/02	Fri.	8.3	Measures of dispersion.	10/07 2AM
10/05	Mon.	8.4	Random Variables and Probability Distributions.	10/12 2AM
10/07	Wed.	8.4/8.5	Random Variables/Expected Value.	10/14 2AM (§8.5)
10/09	Fri.	8.5	Expected value of a random variable. Quiz 5	–
10/12	Mon.	8.6	Bernoulli Experiments and Binomial Distribution.	10/16 2AM
10/14	Wed.	8.7	Normal Distribution.	10/21 2AM
10/16	Fri.	8.7	Normal Distribution.	–
10/19	Mon.	3.1	Linear Inequalities in two variables.	10/23 2AM
10/21	Wed.	3.2	Solutions of systems of linear inequalities.	10/26 2AM
10/23	Fri.	3.3	Linear Programming. Quiz 6	10/30 2AM
10/26	Mon.	3.3	Linear Programming.	–
10/28	Wed.		Supplementary Notes: Matrices.	–
10/30	Fri.		catch up.	–

11/02	Mon.		Review for Exam 3.	–
11/04	Wed.		Exam 3, in class.	–
11/06	Fri.	9.1	Two person Games.	11/12 2AM
11/09	Mon.	9.1	Two person Games.	–
11/11	Wed.	9.2	Mixed Strategy (overview).	–