

Spring 2022

Math. 446 (Sections F13 and F14)

Applied Complex Variables

2:00-2:50 pm M W F

2039 Campus Instructional Facility (CIF)

<i>Instructor</i>	Igor G. Nikolaev
<i>Office:</i>	251CAB
<i>Phone:</i>	333-3082
<i>Email:</i>	inik@illinois.edu

Office Hours

<i>Wednesday:</i>	11:10am - 12:00pm
<i>Friday:</i>	11:10am - 12:00pm

On January 19 and 21, office hours will be on Zoom (see the class web page for details). After that, office hours will be in person unless announced otherwise

Text book:

<i>Title:</i>	Complex Variables and Applications
<i>Authors:</i>	Churchill and Brown
<i>Edition:</i>	9th Edition
<i>Published by:</i>	McGraw-Hill
<i>Copyright:</i>	2014

Material


Chapter	Topic	Class Hours
1	Complex Numbers	3
2	Analytic Functions	4
3	Elementary Functions	4
4	Integrals	5
5	Series	4
6	Residues and Poles	3
7	Applications of Residues	5
8	Mapping by Elementary Functions	4
9	Conformal Mapping	2
10	Applications of Conformal Mapping	4

Grading. Each student will be assigned a semester grade based upon her/his semester average. There will be weekly homework assignments, 3 hour exams and final exam. They will count toward the average grade as follows:

Home works	3 hour exams	Final Exam
25%	45%	30%

Dividing Lines

Letter	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Highest	≥100	94.99	90.99	85.99	82.99	78.99	75.99	72.99	68.99	65.99	62.99	58.99	55.99
Lowest	95	91	86	83	79	76	73	69	66	63	59	56	0

- 
Scores will not be rounded; for example, "78.99" is "B-.

Exams (2039 CIF, regular class time)

Exam	Date
Exam 1	Monday, February 14
Exam 2	Monday, March 28
Exam 3	Wednesday, April 27



Final Exam: 1:30 p.m.-4:30 p.m., Friday, May 6, 2039 CIF (regular class room). This time is unchangeable.

Homeworks

HW	Due Date
HW1	01.31
HW2	02.07
HW3	02.21
HW4	02.28
HW5	03.07
HW6	03.21
HW7	04.04
HW8	04.11
HW9	04.18
HW10	Will not be collected and graded



Lecture notes

Please note that posted lecture notes should be treated as a supplementary material. Your main source of information should be class lectures and the class textbook (although some topics can be found only in my lectures).

Posted lectures can be modified. Please make sure that you preview the most recent version of the posted lectures.

Class Policies

Exams

- You must have your **student ID** on the exam; you may not be allowed to take the exam if you do not have your student ID with you.
- **Re-grading** of exams or homeworks must be requested within **one day** after distribution. No complaints are accepted after that.
- All hour exams are given during regular class hours in the regular room, i.e., **2039 CIF, 2:00-2:50** pm unless announced otherwise.
- **One** lowest score for exams will be dropped.
- **No calculators, phones and other electronic devices are allowed during exams** (in particular, your phone must be either turned off or in silent mode and it must be inside your bag during the exam and not on your desk). No electronic devices are allowed on your desk during the exam unless approved by the instructor at least 7 days before the first exam.
- All exams are closed-books, closed-notes.
- **Attendance at exams is mandatory.** Out of concern for fairness to all students, there will be no make-up exams except in the documented significant and compelling circumstances beyond a student control. This may include illness and other emergencies as described in student code http://studentcode.illinois.edu/article1_part5_1-501.html.
- For excused absences, the student must make arrangements with the instructor to make-up missed exam expeditiously. All letters and notes verifying the nature of your conflict for exams and homeworks must be presented as soon as possible; after 7 days no letter or note will be accepted, and your score will be recorded as 0. If you missed more than one exam, then you will be given make-up exam if you present the supported evidence of your absence; for Exam 3, the letter must be presented not later than May 4, 2022. It is always a good idea to contact Professor Nikolaev and discuss your situation as soon as you can.
- For an absence to be excused, the student must provide an explanation to the instructor and supply supporting evidence, which may include an absence letter, when the absence meets the criteria outlined in

<https://studentcode.illinois.edu/article1/part5/1-501/>

(for the [absence letter](#), students must contact Student Assistance Center in the office of the Dean of Students, not the Emergency Dean). Non-prolonged illness or injury of a student of less than 3 days must be formally documented by a health care provider who has provided the student treatment and must be on the provider's letterhead.

- If you are not excused by your instructor, the exam will be recorded as 0 points. If you missed one exam, then it will be dropped. If you missed more than one exam and are excused by your instructor, you will be given the make-up exam. Please mark your calendar now with the exam times so that you can ensure your participation.

Final Exam

- You must have your student ID during the final exam; you may not be allowed to take the final exam if you do not have your student ID with you.

- No calculators, phones or other electronic devices are allowed (you can bring your phone but your phone must be in your bag and in "silent mode"/turned off during the exam). The final exam is closed-books, closed-notes.

- There will be no make-up final exam unless required by the university policy. For satisfactory reasons (i.e., *documented* medical emergency or other extraordinary circumstances beyond a student's control), undergraduate students may be excused by the dean of their college (not by the instructor) and examined later (most likely, next semester) by their instructor. Please note that no bonus problems will be offered on the make-up final exam and it will not be curved (even if the regular exam has been curved); students taking a make-up final exam have more time to study than the rest of the class. Absence from the final examination for any other cause is reported as a final grade of absent (ABS) in the course and counts as a failure. Graduate students who are unable to take the final examination for *satisfactory reasons* at the scheduled time or to complete other requirements of a course must make individual arrangements with the instructor.

Homeworks

- Homeworks generally will be collected every Monday except when there is a written exam. Homeworks **must be submitted** by the deadline **online** via Moodle. For the directions on how to submit your hwks, see the class web page.

- Please note that homework is your individual work and should be completed as such. Students can work in groups and study together. However, you should make sure that any submitted homework assignment is your individual work, and not the work of others. Any violation of this policy will be considered academic misconduct, and will result in a warning, zero on the assignment and/or a deduction of ten percentage points from the final course grade.

- It is expected that students stay current in homeworks, rather than catch up from time to time.
- Homeworks will be graded for both completion and accuracy. **Two** lowest scores for homeworks will be dropped.
- No late homework will be accepted for any reason. Unless you have a legitimate, documentable (such as a note from McKinley) excuse, a missed homework will be recorded as 0 points.
- If you have a legitimate excuse, the homework assignment will be skipped so that it will not count toward your grade and will not affect your drop scores. Please note that if you did not turn in 3 or more homework assignments (with or without a legitimate excuse), then no lowest score for homework assignments will be dropped. If you did not turn in at least one homework assignment (with or without a legitimate excuse) your total score for homeworks will be 0.

4 hours credit

If you registered for Math 446C14 four hours credit, you have to do all the work required for 3 hours credit (hwks, 3 one hour exams and regular 3 hour final exam) and, in addition, you are required to take 1 hour extra credit exam; for requirements, see the class webpage. Absence from the final examination is reported as a final grade of absent (ABS) in the course and counts as a failure (unless your are given incomplete grade by your dean). Absence from the extra credit exam will automatically decrease your total score for the course by 25%. The date and time of the extra credit exam will be given at the end of semester.

The 4 hour section should involve 25% more work than the 3 hour section. The Undergraduate Office (313 Altgeld) has a form that must be filled in by the instructor and the student before the student will be allowed to change to the 4 hour section. This form represents a contract between the student and the instructor and must describe the work that the additional 25% of the grade entails.

Other Important Class Policies

- *Class Attendance.* Much of what you will gain from the class will come from lectures and interacting with the instructor during in-class activities. **Class attendance is required.** Please note that according to Student Code, irregular class attendance may result in withdrawal from the course with a grade of Withdrawal or Failure, see

http://studentcode.illinois.edu/article1_part5_1-501.html. Instructor will consider your attendance irregular if you missed at least 4 unexcused classes.

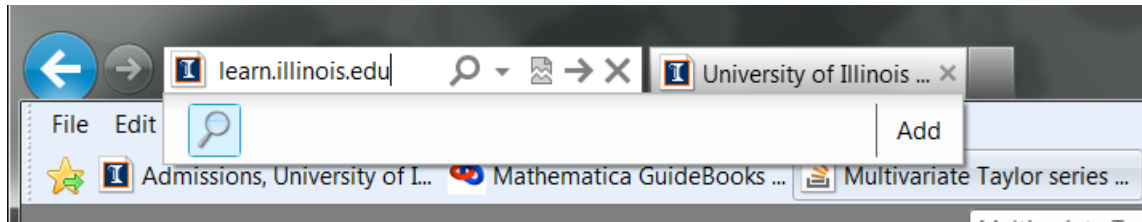
- *Cheating.* Please note that if you have with you during the exam (on your desk or in your hands), including the final exam, calculator, phone (or other electronic device), notes, text books, your own scratch paper, etc., then it will be considered as cheating. Each instance of cheating (not limited to the above description) can result a warning, point deductions from the score for the written test (minimum 40pts, maximum 100pts), failure in the course and can be a cause for dismissal from the university, see [Academic Integrity](#) in the [Student Code](#) for more information.
- All letters and notes verifying the nature of your conflict for exams and homeworks must be presented as soon as possible; after 7 days no letter or note will be accepted and your score will be recorded as 0; if you missed Exam 3, then you will be given make-up exam or it will be skipped if you bring the supporting evidence not later than May 4, 2022. It is always a good idea to contact Professor Nikolaev and discuss your situation as soon as you can.
- If you anticipate being absent on one of homework collection or exam days, please let me know at least one weeks in advance; if it is an emergency, let me know as soon as you can.
- Oversleeping, marking calendar incorrectly or travel plans, no matter how far in advance you made them, how far you are travelling or how much the ticket costs, do not constitute a valid reason for missing exams or final exam.

Students with disabilities. Students with disabilities who require academic accommodation in this course are encouraged to contact [Disability Resources and Educational Services](#) and Professor Nikolaev.

Class Web Page

To enter the class web page simply log into <https://learn.illinois.edu/>

(or you can type in your browser's address bar "learn.illinois.edu" and hit "Enter" key) with your net ID and password and select the course "Math 446 F13/F14 SP22: Applied Complex Variables" (Nikolaev, I).



Also, to enter the class web page, you can follow the link

<https://learn.illinois.edu/course/view.php?id=65605>

Contacting Professor Nikolaev

! When contact Professor Nikolaev via email, please include section number (F13 or F14) or the time when class starts.

Accessing class web page via QR code

If your mobile device has a QR code reader, then you can access the above web pages via QR code given below.

To access web pages, scan with your mobile device the appropriate QR code and your QR code reader will bring you to the web page.

You can find easily free QR code readers/scanners in App Store and other places.

Math. 444 F13/F14 class web page access:

