

## Autumn 2021: Syllabus for SeLo

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### For all of my courses

[Info specifically for **Sets & Logic** starts on the next page.]

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Due to COVID, most office-hours will be via **Zoom**. As I am a senior citizen and my wife is a caregiver for our 103-year-old neighbor, we are especially cautious concerning COVID.

Teaching will take place in our classroom (not remotely), with the hope that most folks are vaccinated and mask-wearing. For in-class exams, if necessary we may use multiple classrooms, so that students feel comfortable with social distancing. *Class attendance is required, and is part of a student's CP, Class participation, grade.*

If UF changes policy about Zoom-teaching from home, then this will change how exams are administered and CP.

2<sup>nd</sup>-day Rosh Hashana is on Sept.8, 2021. We will *not* have class that day; rather, I will make a **Zoom-async** (you can view at your leisure) available sometime on Sept.9.

While unlikely, I might need to replace a classday by an async later in the semester.

**Contacting Prof.K.** If you need to get an important message to me (e.g, you'll be missing an in-class exam), it is *particularly important* that you **email me from your UF address** as soon as possible; preferably several weeks or days before the exam; several hours before, if you didn't know in advance.

I do *not* pick up office phone messages remotely, so it is important that you email me. If urgent, you should also tel. the math dept, **352-294-2350**, and they can contact me at home. The secretaries can also put a note in my mailbox if you request it. [All these tel.numbers are *wired phones*; they do not take text-messages.]

**IMPORTANT:** I will primarily use **email** for contacting students, *not* Canvas-mail. I ask that students read email *at least* twice a day morning/evening (excepting for religious observance).

**IMPORTANT:** Students will be typesetting solutions to problems and will need a real **computer**; a cellphone does not suffice. Also, students will need access to a **printer**, as some of the typeset assignments will need to be handed-in on paper (not electronically).

As most office-hours will be via **Zoom**, students will need **Zoom-capability**.

### Prof.K's clickable links:

- **Teaching Page** <http://squash.1gainesville.com/teaching.html> Has important info for *all* my courses. Gives links to *Putnam competition*, *Robert Long essay competition*, links to the free mathematical typesetting language **TeX/LaTeX**.  
The Teaching Page also has an extensive list of: Usually Useful Pamphlets.
- **Course Page: SeLo** <http://squash.1gainesville.com/course.SeLo.2021t.html> has links to previous versions of our course, which contain all of my previous exams for your studying pleasure!
- **Prof. King's page at @UF** <http://people.clas.ufl.edu/squash/> has a link to a description of the *Robert Long essay competition*. However, for coursework, I use the above Teaching Page and Course Page.
- **Prof.K schedule & office hours** <http://squash.1gainesville.com/info.jksched.html>
- **Math Dept. homepage** <http://www.math.ufl.edu/> Searchable. A wealth of information on applying to grad school, seminars, conferences, faculty, staff, grad listings, tutors for hire.

### University resources, clickable:

- \* **UF syllabus policy** <https://people.clas.ufl.edu/squash/univ-syllabus-policy/>
- \* **Accommodation for students with disabilities** <https://disability.ufl.edu/students/get-started/>
- \* **UF Teaching Center** <https://teachingcenter.ufl.edu/> Broward Hall: 352-392-2010, 352-392-6420.
- \* **Writing Studio** <https://writing.ufl.edu/writing-studio/> 2215 Turlington, 352-846-1138.
- \* **The UF Help desk** <http://helpdesk.ufl.edu/> 352-392-4357.
- \* **End-of-Semester student evals of professors** <https://gatorevals.aa.ufl.edu/students/>

**LOR: Letter-of-recommendation.** I base LORs substantially on how a student “thinks on his/her feet”

I require **two** courses with me, at least one of which is *proof-based*, as well as the student actively participating in class. (Occasionally, one course may suffice if it is a **graduate course** or a **Special Topics** course, e.g, my **MATHEMATICAL CRYPTOGRAPHY** course.)

**Microquizzes.** There will be some number of “pop” (unannounced) microquizzes (**MQ**), each worth **30** points. These will never occur on religious holidays; please **email** of all such religious dates by the first Wedn. after Add/Drop.

Usually, a pop-quiz has a single, easy question. I use them partly for attendance, and checking that an idea from the previous class caught on.

**IMPORTANT:** I *drop* the lowest microquiz score. **AND:** There is **No makeup** for the first missed MQ, regardless of reason; that is what the dropped-score is for.

If a 2<sup>nd</sup> MQ is missed, I may give a make-up, if there was an emergency or if I knew in advance (e.g, you are giving a talk at a conference, and you let me know well in advance).  $\square$

**Class Archive.** We will all use our **SeLo Archive**, a LISTSERV, to communicate to the whole class.

Once Add/Drop has ended, I will email out how to post-to/read-from our **Archive**, which plays the role of a **SeLo Wikipedia** that students build during the semester, acting as a reference for everyone in class.

Students will be posting problem-solutions to the Arhcive, as part of their **CP** (Class Participation) grade.

**Canvas.** Canvas will be used for recording grades, but not much else. We will primarily use *email* and our class Archive (a LISTSERV) to communicate with each other outside of class.

**Abbreviations.** **MQ**, Microquiz. **OH**, Office-Hour. **CP**, Class participation. **IP**, Individual Project. **IOP**, Individual Optional Project. **RLEC**, Robert Long Essay Competition.

**RLEC.** Each year, students who like to write short essays may enter the *Robert Long Essay Competition*. The RLEC has a monetary prize and, more importantly, looks good on a CV.

**Office hours.** [These may *change* during the semester.]

My OHs will start **Monday, 30Aug2021**; before that, I will be available immediately after class to help students.

Currently: OHs are

via **Zoom**: Mondays, 10<sup>th</sup> period [17:10-18:00];

via **Zoom**: Thursdays, 9<sup>th</sup> period [16:05-16:55];

in **LIT402**: Wednesdays, 5<sup>th</sup> period [11:45-12:35];

as well as **by appointment, via Zoom**.

I will email the **Zoom-OH-link** to students, on **Monday, 30Aug2021**.

### Specific SeLo information:

*SeLo is a introduction-to-proof, course. We will learn the Pigeon-hole Principle, Double-counting, the Inclusion-Exclusion technique, Mathematical induction, extremal arguments, and a touch of beginning Number Theory.*

*I run SeLo as a problem-solving course; students will have substantial reading assignments from the two texts below.*

*If time permits, we will “dip a toe” into elementary Graph Theory and consider some tiling problems.*

**Texts:** We will use two, free, online texts, **Book of Proof**, by **Richard Hammack**, and

**Transition to Higher Mathematics: Structure and Proof**, by **Dumas and McCarthy**.

Both PDFs are linked from

**Course Page: SeLo**

<http://squash.1gainesville.com/course.SeLo.2021t.html> and can be freely (and legally!) downloaded.

**Course/Room/time.** MHF3202 12A3 (19805)  
Sets.&Logic

The class meets in **Little Hall room 233** [Center section of the East wing, 2<sup>nd</sup>-floor] on MWF at 4<sup>th</sup> period, 10:40-11:30.

**CP grades.** Each of Sept., Oct., Nov. has a **CP**, **Class participation**, 45pt grade based on speaking in class, attending OHs (probably via **Zoom**), and especially posting solns to non-trivial problems to our Archive. A typical grade is **20**. For *exceptionally* active students, I may give a grade a bit higher than **45**.

**MQ grades.** Each microquiz is **30**pts. Typically, MQs are not announced. A MQ usually has a single routine question. The *lowest MQ score* is dropped; there is **no makeup** for the first missed MQ.

*The classday following an in-class exam often has an MQ with a slight variation of a question from the exam.*

(continued...)

**SeLo Exams.** In SeLo, when the class is large I give several team take-home exams, followed by an in-class component that students take individually. A student's score is the sum of the take-home and in-class.

Since I do not yet know the class size, I'm not yet sure about exam structure, other than there will be 3 exams, and an an end-of-semester take-home Individual Project. [The Project *may* be optional; I will decide that later in the semester.]

Dates for exams for Autumn-semester, 2021:

Home-A: **Tue.12Oct. – Wed.20Oct.** Class-A **Fri.22Oct.**

Home-B & Class-B: Dates TBA.

Class-C: Likely **Wedn., 17Nov.**

Individual Project (possibly optional): Due either **Wedn, 08Dec** or **Thu, 09Dec.** I will give an *estimate* of current course-grade by the withdraw date of **Monday, 22Nov2021.**

*Sincerely, Prof. King*