

Autumn 2021: Syllabus for SeLo

Prof. Jonathan L.F. King
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For all of my courses

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

Who? Prof. King **Address:** squash@ufl.edu
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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.

2nd-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 class day 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.ua.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 2nd 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). □

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 Archive, 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, 10th period [17:10-18:00];

via Zoom: Thursdays, 9th period [16:05-16:55];

in LIT402: Wednesdays, 5th 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.igainesville.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, 2nd-floor] on MWF at **4th 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 **30pts** 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 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