

## Autumn 2022: Syllabus for SeLo

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### For all of my courses

[Specific [Sets & Logic](#) info starts on the next page.]

**Who?** Prof. King      **Address:** [squash@ufl.edu](mailto:squash@ufl.edu)  
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To find my office (402 Little Hall; Top floor, NE corner) just “[Maximize  \$x\$ ,  \$y\$  and  \$z\$ .](#)” (Note: I do *not* pick up tel. messages remotely, but do read email multiple times a day. It is almost always better to email me first, before telephoning my office.)

*Class attendance is required, and is part of a student’s CP, Class participation, grade.*

**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 ed-dress** 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 some 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  $\text{T}_{\text{E}}\text{X}/\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ .

The Teaching Page also has an extensive list of:

Usually Useful Pamphlets.

- [Our SeLo Webpage:](#) <http://squash.1gainesville.com/course.SeLo.curr.html> Info for the current semester, as well as links to previous versions (see [Nostalgia](#)) of SeLo, containing previous exams and micro-quizzes, for your studying pleasure!

- [Prof. King’s page at UF](#) <http://people.clas.ufl.edu/squash/> has a link to the *Robert Long essay competition*.
- [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://academicresources.clas.ufl.edu/> has free tutoring, both in-person and via zoom.
- \* [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. (Just handing-in the MQ with name and ordinal earns **5** points.)

MQs never occur on religious holidays; **email me** 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). □

**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.

**Possible End-of-Semester Games Party!** If COVID diminishes significantly, we *may* have an *End-of-Semester Games Party*. In the past, the Games Party has been on the last date of class, at Pascal’s Cafe, in the

Christian Study Center of Gainesville  
112 NW 16th Street

**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 great on a CV.

**Office hours.** My current *weekly schedule*. (OHs may change slightly during the semester, and other days/times may be available by appointment, sometimes *via Zoom*.)

### 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** (BoP), by **Richard Hammack**, and

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

Both PDFs are linked from

**Course Page: SeLo**

and can be <http://squash.1gainesville.com/course.SeLo.curr.html>

freely (and legally!) downloaded. *We will cover most of BoP, with extra material on  $\infty$ -cardinalities.*

**Course/Room.** MHF3202 17HE (16078) Sets.&.Logic

The class meets in **Anderson 21** on MWF at **5th period**, 11:45- 12:35.

**CP grades.** Each of Sept., Oct., Nov. has a **CP**, **Class participation**, **45**pt grade based on speaking in class, attending OHs (sometimes 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 class day following an in-class exam often has an MQ with a slight variation of a question from the exam.*

(continued...)

**SeLo Exams.** In SeLo, some of the exams have a *team take-home component*, with team's of 3 (sometimes 2), students, followed by an *individual in-class component* that students take (unsurprisingly) individually. A student's score is the sum of the take-home and in-class. There will be an end-of-semester take-home IOP (Individual Optional Project) that will be due the day after the semester's last class-day.

### Dates for exams for Fall-semester, 2022:

(Note: Occasionally an exam needs to be moved a class-day later. Since that is a class-day, I do *not* [barring extenuating circumstances] if you miss class and the exam that day.) (BoC = *Beginning of Class*, and wATMP = *with All Team Members Present*.)

There will be a microquiz on the classday before *Thanks-giving Break*, and on the classday after *Thanksgiving Break*, 21Nov and 28Nov. (The dates of ThBr are November 23–26.)

Hurricane Ian closed UF for 3 days, causing dates for Home/Class-A to be changed.

Home-A: PDF available evening of Tues, 20Sep2022; due BoC ~~Wedn, 28Sep~~ Monday, 03Oct. (Rosh Hashana: Sep26,27. YK:Oct.05.)

Class-A: ~~Friday, 30Sep~~ Monday, 03Oct2022.

Home-B: PDF available evening of Tuesday, 18Oct.; due BoC wATMP Mond, 24Oct.

Class-B: Wedn, 26Oct.

Class-C: Wedn, 16Nov.

Mond, 21Nov. (*Withdraw date*): Canvas will have an *estimate* of current course-grade, the evening before this date.

*Typeset* INDIVIDUAL OPTIONAL PROJECT: Avail. Tuesday, 29Nov. If you choose to: Due Fri., 09Dec2022, slid under my office door, LIT402.

Wedn, 07Dec. (*Pearl Harbor Day*): *Last day class*. Class photo. *Possible Games Party!*

*Sincerely, Prof. King*