

Autumn 2022: Syllabus for SeLo

Prof. Jonathan L.F. King
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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
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Math Dept: 3rd floor Little **Dept. Tel:** **352-294-2350**

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://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. (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 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.

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 ∞ -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.)

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

Class-A: **Friday, 30Sep**.

Home-B: PDF available evening of **Mond, 17Oct**; 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. **Tues-day, 29Nov**. If you choose to: Due **Thur, 08Dec**, slid under my office door, LIT402.

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

Sincerely, Prof. King