

**Math 175**  
**Mathematics of Cryptography: an Introduction**  
George Mason University, Fall 2019  
<http://lukyanenko.net/teaching/2019/175/>

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**Professor:**

Anton Lukyanenko  
alukyane@gmu.edu

**Office Hours:**

MW 4-5pm & by appointment  
4113 Exploratory Hall

**Class:**

Monday-Wednesday 9-10:15am  
4106 Exploratory Hall

**Computer Lab:**

Fridays 9-10:15am  
4107 Exploratory Hall

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**For Fall 2019, the course will satisfy the Discrete Mathematics (Math125) requirement for the math major. No guarantee is made for other majors.**

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**Grade components:**

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|--------------------------------------------|-------------------|
| • Homework: 30%                            | Lowest 2 dropped. |
| • Quick Quizzes: 10%                       | Lowest 2 dropped. |
| • Labs: 20%                                | Lowest dropped.   |
| • Intermediate Chapters: 5% per submission | Lowest dropped.   |
| • Final Textbook: 20%                      |                   |

**Letter grades will be based on the usual breakdown.**

- 90-93.3 for A-, 93.4-96.6 for A, 96.7-100 for A+
- 80-83.3 for B-, 83.4-86.6 for B, 86.7-89.9 for B+
- 70-73.3 for C-, 73.4-76.6 for C, 76.7-79.9 for C+
- 60-69.9 for D
- 0-59.9 for F

**Special Dates:**

Intermediate chapter submissions will be due in class on Fridays: 9/20, 10/4, 10/25, 11/15, consisting of chapters finished by the previous Friday. The **full** final textbook is due on 12/5. Monday 10/14 will take place on Fake Monday 10/15.

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**Support:** Scheduled office hours are intended to provide additional instruction and writing assistance. You are encouraged to go to office hours early and often. Additional office hours may be scheduled by request.

**Attendance:** Active participation and attendance is critical to this class, both for the individual student and their group. To encourage this, up to 3 non-emergency absences will be allowed per student, with late arrival counting as 1/2 of an absence. Any further absence will reduce the student's final grade by 10%.

**No extensions or make-ups** will be provided, except in emergency situations.

**Groupwork vs Cheating:** You should study and work on assignments with friends (make friends with some classmates!). But make sure you aren't just watching *them* learn. Cheating, copying, or disruptions to other students' ability to study will be reported to the university.

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The course is teamwork-based, with discussion guided by worksheets in the classroom and labs in the computer lab.

**The final textbook** consists of all of the worksheets completed through November 25. Each worksheet will be turned into a chapter for the book, with both clear solutions for each problem and relevant context and definitions. The chapters will be graded on both correctness and clarity of exposition. Students are encouraged to type up their solutions in L<sup>A</sup>T<sub>E</sub>X (<https://www.overleaf.com/> is recommended) for easier editing, but neat hand-written copies will also be accepted.

**Intermediate chapter submissions** will be made on 9/20, 10/4, 10/25, 11/15, consisting of chapters finished by the previous Friday (and not previously submitted). These will be re-submitted, with corrections, as part of the final textbook.

**Homework** accompanies each worksheet, and is due one week after the worksheet is completed. Homework is **not** included in the final textbook.

**Quick Quizzes** taking 5 minutes will be given on occasion at the start of class, and will consist of 3 multiple-choice questions about recent content.

**Computer lab assignments** will implement the theory we develop in class and explore some additional topics. These are turned in once they are completed.

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**Resources:** The following groups exist to support student learning, with both academic and non-academic issues, so don't hesitate to contact them:

- General Advising: <http://advising.gmu.edu/>
- Student Services Center: <https://www.gmu.edu/resources/students/>
- Disability Services: <http://ds.gmu.edu/>
- Counseling and Psychological Services: <https://caps.gmu.edu/>
- Compliance Diversity and Ethics Office: <https://diversity.gmu.edu>

Issues affecting learning may also be discussed with the professor. In certain cases, the professor is required to report such issues to appropriate university units.

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#### Want more math?

- Talk to the professor during office hours.
  - Sign up to be a Learning Assistant or Tutoring Center Assistant.
  - Do research with the Mason Experimental Geometry Lab (MEGL).
  - Become a math major or minor!
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