**[Math E-320]:**

**Teaching Mathematics with a Historical perspective**

Course Overview and Contact Information

**Course Overview**

Semester and Year: Spring 2021

Day/Times: Mondays, 5:50-7:50 PM

Format: Web conference course

**Instructor(s) Contact Information**

Name: Oliver Knill

Office/ Office hours: Fridays 4-5 PM

Phone: 617 495 5549

Email: knill@math.harvard.edu

Course Description and Learning Objectives

This course is a panoramic view of math. Each week covers an other area of mathematics.

The focus is to look at historical developments, which includes also developments up to now.

History tells us much about the structure of mathematics and about the learning of mathematics.

Prerequisites are interest in mathematics and courage to look also at new things.

Some calculus background is helpful, but not needed. No book is required. We will recommend some texts. The course will have a short evaluation part each class, a weekly homework component as well as a final project.

Course Materials

***Course Materials are available on our website.***

Grading

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% Weekaly Class work 20 %

% Weekly Homework 20 %

% Weekly Quizzes 20 %

% Final project 40 %

Expectations and Policies

***Attendance***

*Regular real-time attendance is required.*

***Accommodation Requests***

The Harvard Extension School provides an inclusive, accessible academic community for students with disabilities and chronic health conditions. The Accessibility Services Office (ASO) offers accommodations and supports to students with documented disabilities. Contaact accessibility@extension.harvard.edu or by phone at 617-998-9640.

***Academic Integrity***

We follow the Harvard Extension School policies on academic integrity. You are responsible to know how to use sources responsibly.

Course Outline and Schedule

**Date**

Jan 24 Class 1: Mathematics

Jan 31 Class 2 Arithmetic

Feb 7 Class 3 Geometry

Feb 14 Class 4 Number Theory

Feb 21 NO CLASS (Presidents’ Day)

Feb 28 Class 5: Algebra

Mar 7 Class 6: Calculus

Mar 14 NO CLASS (Spring Break)

Mar 21 Class 7 Set theory

Mar 28 Class 8 Probability

Apr 4 Class 9 Topology

Apr 11 Class 10 Analysis

Apr 18 Class 11 Cryptology

Apr 25 Class 12 Dynamics

May 2 Class 13 Computer Science

May 9 Class 14 Project