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# MTH182 Syllabus

Spring 2022

*Discrete Mathematics with Applications* (5th ed.) S. Epp

## **Week of 1/17:**

Introduction:  
Review of induction

## **Week of 1/24:**

*Tuesday is Add/Drop/Audit deadline*  
Strong induction  
Integers: Divisibility

## **Week of 1/31:**

Primes  
The quotient/remainder theorem (division algorithm)

## **Week of 2/7:**

The quotient/remainder theorem (division algorithm) continued  
**Exam I**

## **Week of 2/14:**

Greatest common divisor & least common multiple  
The Euclidean algorithm  
The Fundamental Theorem of Arithmetic

## **Week of 2/21:**

**Presidents' Day** *No class on Tuesday*  
*Pass/Fail deadline is Wednesday*  
Cryptography

## **Week of 2/28:**

Integers in arbitrary bases  
**Exam II**  
*Mid-semester is Friday*

## **Week of 3/7:**

**Spring Break**

**Week of 3/14:**

Relations  
Equivalence relations & equivalence classes  
Congruence & arithmetic modulo  $n$

**Week of 3/21:**

Functions

**Week of 3/28:**

Bijjective functions

**Week of 4/4:**

Cardinality of sets  
**Exam III**  
*Withdrawal deadline is Friday*

**Week of 4/11:**

Algorithms  
Growth of functions

**Week of 4/18:**

**Patriot's Day:** *Class does meet Tuesday*  
Analysis of algorithms

**Week of 4/25:**

**Exam IV**  
*Tuesday is last class*