

# Class Syllabus: 4010 / 5010 Cosci.

Date	No	Description
Aug 29	01	Introduction to class
Aug 31	02	Economics of Blockchain and Intro to Go
Sep 5	03	Details of Programming in Go
Sep 7	04	Mining - what is it - how it works (Information for Assignment 2)
Sep 10	05	Go Interfaces and Go Weaknesses
Sep 12	06	Merkle Trees. What they can do and how we use them (Information for Assignment 3)
	07	Assignment 01 Due - Go
Sep 14	08	Transactions in Blocks
Sep 17	09	Smart Contracts and how they fit into a blockchain
Sep 19	10	Public / Private Keys and Signing
		Assignment 02 Due - Mining
Sep 24	11	Wallets and the in-Class coupon dApp
Sep 26	12	Economics of Software - Blockchain Economics
		Assignment 03 Due - Merkle Trees
Sep 28	13	Stocks / Bonds / ICOs / Raising Funds etc.
Oct 1	14	Blockchain and Accounting, Land Ownership, Titles, Signatures.
Oct 3	15	Introduction to Ethereum
		Assignment 04 Due - Transactions
Oct 5	16	Introduction to Solidity
Oct 8	17	ERC-20 Smart Contracts (Open-Zeppelin Library)
Oct 10	18	ERC-721 and other Smart Contracts ( Crypto Kitties )

Date	No	Description
		Assignment 05 Due - Wallets
Oct 12	19	truffle and Ethereum - Your Successes are Finite, Failures are Forever
Oct 15	20	ICOs - 506(d), Wyoming Laws, Sub-Part-S - Raising Funds
Oct 17	21	What we have missed - Lecture on missing stuff for Midterm - Last Midterm Content
		Assignment 06 Due - Smart Contracts
Oct 19	22	Overview of a Distributed Application (dApp), HTML, CSS, ECMA-Script.
Oct 22	23	Our in-class dApp project
Oct 24	24	Solidity Contract for Our Project - Outline / Overview / Software Tests
Oct 26	25	Midterm Review
		Paper Due - "Economic Trends: Why Blockchain Matters to the World Economy"
Oct 29		Midterm Exam (Tentative Date)
Oct 31	00	Halloween Day - Fun / Dress-Up / and / Stories (Optional Class)
Nov 2	26	Advanced Security: zero-knowledge-proofs.
Nov 5	27	Advanced Security: distributed key generation.
Nov 7	28	Metamask - Setting up Ethereum Accounts - Get Ether
		Assignment 07 Due - Solidity & Truffle (ERC 20 Based Contract)
Nov 9	29	Loading contracts - using web3
Nov 12	30	Testing with "mocha" v.s. testing with solidity.
Nov 14	31	Sharing Transcripts - Contract Overview
		Assignment 08 Due - Test web app / Makes calls to Contract
Nov 16	32	Testing web apps. More on testing.
Nov 19	33	Transaction timing - block timing - gas costs - work queues.

Date	No	Description
Nov 21	34	Thanksgiving Break - Probably have class this day.
		Assignment 09 Due - Transcripts Contract with Tests of Contract (truffle)
Nov 23		Thanksgiving Break - I don't think there is a lecture on this day.
Nov 26	35	Advanced Security: what is 2fa, JWT, Diffie-Hellmen key exchange, RSA, EC
Nov 28	36	Advanced Security: how to protect yourself.
		Assignment 10 Due - Web Front End to dApp pt1
Nov 30	37	How to wealth is created
Dec 3	38	Basics of Accounting - Enough to build a business and hire an accountant.
		Why blockchain is going to eradicate auditing of books.
Dec 5	39	Makeup lecture - cover what we missed (or if I end up traveling).
Dec 7	40	Makeup lecture - cover what we missed (or if I end up traveling).
		Assignment 11 Due - Web Front End to dApp pt2
Dec 10	41	Finals Review