

***Blockchain, CryptoCurrencies, Digital Assets:  
Business, Legal, and Regulatory Issues  
LGST 6440-001, Fall 2023***

**Instructor:** Donna Redel | dredel@wharton.upenn.edu

Donna Redel is a recognized thought leader on blockchain-digital assets, an angel investor and a philanthropist. She was the managing director of The World Economic Forum, the foremost global organization combining business, political, academic, and other leaders of society committed to improving the state of the world. Ms. Redel was the first woman to chair a USA exchange, The Commodity Exchange. Following her work in global organizations she began a second career as a New York City based advisor, speaker, and investor focusing on financial technology, blockchain and emerging technologies. She is an active participant in the startup community with New York Angels, serving as a board member, the co-chair of the Blockchain Committee and the Israeli Investment Committee and chair of the Education Committee. Ms. Redel is an Adjunct Professor at Fordham Law School and Business School where she developed and teaches two courses, -Blockchain-Crypto Currencies-Digital Assets and DeFi & Smart Contracts. She is the co-founder of The Fordham Law Blockchain Regulatory Symposium. Highlights of Donna's committee memberships are the NYS Committee for the Advancement in Women's Leadership in Financial Services, The Chamber of Digital Commerce, INATBA's Academic Advisory Board which focuses on EU Digital Policy considerations, the MoMA Photography Committee, a Board Member of The Wall Street Blockchain Alliance, and Advisor to Securitize. She has a J.D. from Fordham Law School, an MBA from Columbia University, and a BA from Barnard College (Columbia).

**Class Hours:** Wednesday 3:30-6:30pm

**Office Hours:** Wednesday 1:00-3:00pm or by appointment

**Overview:** The course is designed to be generally accessible for all students: it does not require any technical skills, crypto financial knowledge, or prior experience with cryptocurrencies. The course will explore the development of blockchain as a vehicle for innovation, the legal issues surrounding digital assets (blockchain) projects/protocols through case studies, and current regulation-litigation.

The course will address the basics of virtual and crypto currencies, digital assets, tokens, Decentralized Finance (DeFi), DAOs and NFTs. Students will analyze Bitcoin, Ethereum, several Initial Coin Offerings (ICOs) and newer digital assets, including governance tokens, stablecoins and CBDCs (central bank digital currency) from legal, business, economic, and policy perspectives. The course will review what went wrong in the crypto ecosystem and the consequences, We will examine the current investment trends and discuss them with top fund managers.

**Pedagogy:**

- Weekly readings (articles, cases, regulatory filings) and discussions
- Instructor lectures and materials

- Guest speakers from different sectors of the industry. Student participation in Q&A is required.

#### **Course Evaluation Criteria:**

- Weekly Response to Articles or Assignments (via private Telegram): **10%**
- Class Participation, including submission of questions and discussion topics for guest speakers: **25%**
- Mid-Term Group Project: **25%**,
  - Working in a group, students will present via slide deck and oral presentation a comprehensive review of a current subject matter (for example: DeFi Protocols, DAOs, Regulatory Actions, etc.)
  - All topics and groups must be approved no later than Week 5. 6-8 students per group
- Final Paper Project: **40%**
  - Students will select an investment opportunity or legal-policy issue and discuss the pros and cons in a 10-page paper or written presentation.
  - Students are encouraged to use varied resources and presentation materials to assess the investments risks of their opportunity
  - Topics to be selected and approved with instructor

#### **Industry Sources:**

Due to the fast-changing nature of the subject matter students are encouraged to stay current with developments. For daily breaking news, excellent sources are:

- CoinDesk : <http://www.coindesk.com/>
- The Block: <https://www.theblockcrypto.com>
- The Defiant: <https://www.thedefiant.io>
- Matt Levine: <https://www.bloomberg.com/account/newsletters/money-stuff>

#### **Class Telegram Channel (Participation required)**

Telegram is commonly used in the cryptocurrency industry to organize communities around a specific project and distribute information on the market. We will use a private Telegram channel to organize class discussions and share breaking news.

## Weekly Class Schedule:

Week 1: August	Building the foundational knowledge of cryptocurrency and its regulatory structure
<b>Guest Instructor (weekly):</b> Michael Maloney, blockchain tech expert <a href="mailto:mimaloney@fordham.edu">mimaloney@fordham.edu</a> <ul style="list-style-type: none"><li>• What is Money? From Yapp Stones to Digital Cash</li><li>• What is the difference between currencies, commodities, securities, and derivatives?</li><li>• An introduction to the regulatory landscape—SEC, CFTC, FINCEN, FINRA, IRS, OCC, state regulators</li><li>• Who has regulatory oversight and why? Is there clarity?</li><li>• Rules v Principles Based Regulation</li><li>• What is the Howey Test and why is it relevant?</li><li>• Is the USA losing the crypto race?</li></ul>	
<b>Readings for Week 1:</b> <ul style="list-style-type: none"><li>• WATCH: “Functions of Money” Khan Academy, <a href="https://bit.ly/3aleyoI">https://bit.ly/3aleyoI</a></li><li>• <i>SEC v Howey</i>, Supreme Court (1946), <a href="https://bit.ly/3I7u25G">https://bit.ly/3I7u25G</a></li><li>• Principles based regulation: <a href="https://www.cftc.gov/PressRoom/SpeechesTestimony/opatarbert3">https://www.cftc.gov/PressRoom/SpeechesTestimony/opatarbert3</a></li><li>• Morrison Cohen litigation tracker</li><li>• Michael Saylor, CEO of MicroStrategy, and Ross Stevens, <a href="https://bit.ly/3AeO2rf">https://bit.ly/3AeO2rf</a></li><li>• Optional: CFTC Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets, <a href="https://bit.ly/3owczpG">https://bit.ly/3owczpG</a></li><li>• Optional: Tools for Crafting Sound Financial Regulation, <a href="https://bit.ly/3iyWPOV">https://bit.ly/3iyWPOV</a></li></ul>	
Week 2: September	An Introduction to Blockchain, Bitcoin & Ethereum
<b>Guest Speaker:</b> Amanda Cavaleri, President of The Bitcoin Today Coalition (pending) <ul style="list-style-type: none"><li>• An introduction to blockchain: overview of the technology, including the discussion of hashing, distributed ledgers, private and public keys, and digital signatures.</li><li>• The difference between a hack, a fork, and stolen keys: what are the implications?</li><li>• Bitcoin: Its beginnings; Is it money? Who is “Satoshi Nakamoto”? What is Bitcoin’s governance structure? What is mining? ESG considerations. Explanation of the Bitcoin Cash fork. What is a “maxi”?</li><li>• Ethereum: Its beginning; its use; Proof of Stake; Who is Vitalik Buterin? Who is Joe Lubin? Is it a security and why do we care?</li></ul>	
<b>Readings for Week 2:</b> <ul style="list-style-type: none"><li>• <u>The Blockchain and the New Architecture of Trust Challenge</u> Chapter 1: “The Trust Challenge” by Kevin Werbach</li><li>• “Bitcoin: Peer-to-Peer Electronic Cash System” (Satoshi Nakamoto), <a href="https://www.bitcoin.com/bitcoin.pdf">https://www.bitcoin.com/bitcoin.pdf</a></li></ul>	

- Skim Read: Ethereum White Paper, <https://github.com/ethereum/wiki/wiki/White-Paper>
- Optional: Bitcoin Magazine “What is Bitcoin”, <https://bitcoinmagazine.com/guides/what-is-bitcoin>

Week 3: September	The Lessons Learned from ICOs
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**Guest Speaker:** Lewis Cohen, Founding Partner DLX (pending)

- The DAO Report: The SEC’s “line in the sand case”.
- The ICO craze of 2015-2018 put into perspective. What were the pros and the “cons”?
- What is a Ponzi Scheme and MLM?
- What is a SAFE, a SAFT and what are the legal issues surrounding it?
- What was Kik? Why was a token introduced?
- What was the Telegram settlement?
- What was the EOS settlement?
- What was the decision in LBRY and what does it mean for coins?
- What is the status of SEC v Ripple/XRP?

**Readings for Week 3:**

- “An assessment of the DAO” SEC report on DAO (July 2017), <https://bit.ly/3owcXVa>
- SEC Howey Coins, <https://www.sec.gov/news/press-release/2018-88>
- The SAFT Project, <https://saftproject.com/>
- SEC v Telegram Settlement: <https://www.sec.gov/news/press-release/2020-146>
- SEC v. Telegram: Key Takeaways and Implications, <https://www.cooley.com/news/insight/2020/2020-05-07-sec-v-telegram-key-takeaways-implications>
- Kik (Wells submission, SEC complaint, rebuttal by Kik, Judge Hellerstein decisions)
- Optional: Ripple White Paper: [https://ripple.com/files/ripple\\_solutions\\_guide.pdf](https://ripple.com/files/ripple_solutions_guide.pdf)
- Crypto Law Podcast: Gabriel Shapiro v Lewis Cohen, <https://apple.co/3A4Cw1T>

Week 4: September	Where’s the Money? Smart Contract, Tokens, Decentralized Finance (DeFi)
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**Guest Speaker:** Jesus Rodriquez, Founder and CEO, IntoTheBlock (pending)

- Is Code Law?
- What is DeFi? Building a DeFi lending business, liquidity pools.
- Cases or Protocols: Uniswap, Compound, Aave,

**Readings for Week 4:**

- “Blockchain and the Law: The Rule of Code” by Primavera De Filippi and Aaron Wright (on reserve)
- Digital Assets and Blockchain Technology: U.S. Law and Regulation, by Daniel T. Stabile, Kimberly A. Prior, Andrew M. Hinkes (on reserve)
- <https://www.sec.gov/news/statement/crenshaw-defi-20211109>
- TBD

Week 5: September	Introduction to Stablecoins and Central Bank Digital Currency (CBDC)
<b>Guest Speakers: Guest Speakers: Jeremy Allaire, Circle (pending)</b>	
<ul style="list-style-type: none"> <li>• Stablecoins are drawing a lot of regulatory attention...why?</li> <li>• What are stablecoins? What are the uses?</li> <li>• The controversy around Tether.</li> <li>• What is Circle, what is the business case?</li> <li>• <i>The TerraLuna meltdown.</i></li> <li>• SEC v TerraLuna.... the implications</li> <li>• What happened to LIBRA (now Diem) Facebook's venture into Crypto?</li> <li>• How are stablecoins regulated? How should stablecoins be regulated?</li> <li>• What are CBDCs and the current global status?</li> <li>• Why are states passing anti-CBCD legislation?</li> <li>• Wallets – the new frontier?</li> <li>• President's Working Group</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Readings for Week 5:</b></li> <li>• TerraLuna -TBD</li> <li>• MakerDao (Dai) White Paper, <a href="https://makerdao.com/en/whitepaper/">https://makerdao.com/en/whitepaper/</a></li> <li>• Tether White Paper, <a href="https://tether.to/wp-content/uploads/2016/06/TetherWhitePaper.pdf">https://tether.to/wp-content/uploads/2016/06/TetherWhitePaper.pdf</a></li> <li>• President's Working Group, <a href="https://home.treasury.gov/news/press-releases/jy0454">https://home.treasury.gov/news/press-releases/jy0454</a></li> <li>• <a href="https://home.treasury.gov/system/files/136/StableCoinReport_Nov1_508.pdf">https://home.treasury.gov/system/files/136/StableCoinReport_Nov1_508.pdf</a></li> <li>• <b>OPTIONAL READINGS</b></li> <li>• Cryptocurrency &amp; Libra: Senate Banking Testimony, <a href="https://bit.ly/3uDOcaF">https://bit.ly/3uDOcaF</a></li> <li>• Paxos USD, <a href="https://www.paxos.com/wp-content/uploads/2019/02/PAX_Whitepaper.pdf">https://www.paxos.com/wp-content/uploads/2019/02/PAX_Whitepaper.pdf</a></li> <li>• Libra Whitepaper, <a href="https://libra.org/en-US/white-paper/">https://libra.org/en-US/white-paper/</a></li> <li>• Skim: Libra Revised Whitepaper, <a href="https://www.diem.com/en-us/white-paper/#cover-letter">https://www.diem.com/en-us/white-paper/#cover-letter</a></li> <li>• Skim: The differences between Bitcoin and Libra should matter to policymakers, <a href="https://bit.ly/3izdsKu">https://bit.ly/3izdsKu</a></li> <li>• Algorithmic stablecoins: Basis, <a href="https://www.basis.io/basis_whitepaper_en.pdf">https://www.basis.io/basis_whitepaper_en.pdf</a></li> <li>• Highlights: "Digital Currency Wars: A National Security Crisis Simulation", <a href="https://www.youtube.com/watch?v=Q2OKCH0gl7c&amp;feature=youtu.be">https://www.youtube.com/watch?v=Q2OKCH0gl7c&amp;feature=youtu.be</a></li> </ul>	

Week 6: October	Introduction to Exchanges, Platforms, Banking & Lending
<ul style="list-style-type: none"> <li>• <b>Guest Speaker: TBD,</b></li> <li>• Introduction to exchange models – Centralized, Decentralized</li> <li>• What went wrong with FTX?</li> <li>• What is regulation should look like? Is it possible to achieve in the USA in the short term?</li> <li>• What is KYC – AML and the Travel Rule? What are the requirements? Is it effective?</li> </ul>	

- What is geo-blocking?
- Sanctions and crypto
- Overview of global regulation trends and the US' jurisdictional reach.
- Building a crypto bank: Anchorage, Avanti, Kraken
  - What is the status of crypto banking and OCC?
- Tracing blockchain transactions, ransomware. Case: Pipeline.
- What is leverage?
- Perils of Crypto Lending Businesses: BlockFi, Celsius, Coinbase's LEND
- Coinbase v SEC
- Kraken settlement implications
- Bittrex case implications

#### **Readings for Week 6:**

- BlockFi Settlement, Celsius, Coinbase - TBD
- SEC Guidance on KYC/AML, <https://www.sec.gov/about/offices/ocie/amlsourcectool.htm>
- Celsius bankruptcy -TBD
- Coinbase insider trading case – TBD
- FTX -TBD

Week 7: October

#### **PRESENTATIONS**

- Class presentations by the groups respond to Q&A.

Readings for Week 7 TBD

Week 8: Nov.

Lending Protocols, the return of the DAO,

#### **Guest Speaker: Maggie Hsu 16z (pending)**

- A look at DeFi lending and borrowing protocols. How do they operate? What are the business and legal issues?
- DAOs are flourishing everywhere. How do they operate? Who is investing in them? What are the uses of the governance tokens? A look at The ConstitutionDao and other examples
- The investment thesis of 16z - examples

#### **Readings for Week 8:**

\*[https://coopahtroopa.mirror.xyz/\\_EDyn4cs9tDoOxNGZLfKL7JjLo5rGkkEfRa\\_a-6VEWw](https://coopahtroopa.mirror.xyz/_EDyn4cs9tDoOxNGZLfKL7JjLo5rGkkEfRa_a-6VEWw)  
TBD

Week 9: Nov	Tokenization of Capital Markets
<b>Guest Speaker: Securitize (pending)</b> <ul style="list-style-type: none"> <li>• A deeper dive into Exchanges and Liquidity</li> <li>• What is a Security Token? Where do they trade?</li> <li>• Fractionalization, Securitization and Legal Issues</li> <li>• What is decentralized and centralized exchanges? What are the differences, the regulations, and the risks?</li> <li>• Exchanges offering multiple products and diversification is this possible in the USA</li> <li>• Bankruptcy – “not your keys not your crypto”</li> <li>• Bringing real world assets on chain</li> </ul>	
<b>Readings for Week 9</b> <ul style="list-style-type: none"> <li>• Statement on Digital Asset Securities Issuance and Trading, <a href="https://www.sec.gov/news/public-statement/digital-asset-securities-issuance-and-trading">https://www.sec.gov/news/public-statement/digital-asset-securities-issuance-and-trading</a></li> <li>• SEC reg relating to ATS: 17 CFR §242.301 regarding specific requirements for alternative trading systems: <a href="https://www.law.cornell.edu/cfr/text/17/242.301">https://www.law.cornell.edu/cfr/text/17/242.301</a></li> <li>• SEC Statement on Securities Law Considerations for Digital Asset Securities, <a href="https://www.sullcrom.com/files/upload/SEC-Publication-SEC-Statement-on-Securities-Law-Considerations-for-Digital-Asset-Securities.pdf">https://www.sullcrom.com/files/upload/SEC-Publication-SEC-Statement-on-Securities-Law-Considerations-for-Digital-Asset-Securities.pdf</a></li> </ul>	
Week 10: Nov	Punks, Apes and More: NFTs
<p><b><u>NOTE:</u></b> Paper topics due, students must submit and get approval paper topics</p> <b>Guest Speakers: Stuart Levi, partner Skadden IP and Steve McKeon, Collaborative (pending)</b> <ul style="list-style-type: none"> <li>• Marketplaces</li> <li>• Issuance</li> <li>• Crypto Punks , Apes</li> <li>• Legal Issues – insider trading, IP</li> <li>• DAOs</li> <li>• A look at the convergence of gaming and crypto: the opportunities and challenges.</li> <li>• Investing in NFTs</li> </ul>	
<b>Readings for Week 10: TBD</b> <ul style="list-style-type: none"> <li>• NFTs on SNL: <a href="https://www.youtube.com/watch?v=mrNOYudaMAc">https://www.youtube.com/watch?v=mrNOYudaMAc</a></li> <li>• TBD</li> <li>• Podcasts to be distributed</li> </ul>	
Week 11: Nov	Traditional Institutional Investing in Blockchain and Crypto

**Guest Speakers Panel: Speakers from Fidelity, Visa, GoldenTree**

- What are the reasons to invest in blockchain and crypto?
- What are the risks, the opportunities, and the trends?
- What is happening with maker makers – Jump, Jane Street
- Case studies of top returns and failures.

**Readings for Week 11:**

- Definition of Accredited Investor and FAQ, <https://bit.ly/3uEJJE>
- Cases: TBD

**Week 12: Dec**

**Policy Considerations, the Future of Regulation and VC investing**

**Guest Speaker:** *Paradigm, Blocktower, Galaxy, Multicoin, CoinFund, Avalance (pending)*

- What are the current tax requirements for cryptocurrency?
- What policy considerations are on the horizon in the United States?
- The infrastructure crypto inclusion
- What does the uncertainty in regulation mean for product innovation?

**Readings for Week 12 TBD**

<https://news.bloombergtax.com/financial-accounting/tesla-bitcoin-bet-exposes-limits-of-crypto-accounting-rules>

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