BLOCK BY BLOCK:
LOOKING TO THE FUTURE OF BLOCKCHAIN

Community + Values
UNIVERSITY OF DENVER

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Blockchain Resources

LEARN MORE ABOUT OUR SPEAKERS

Dr. Wendy Charles, Chief Scientific Officer, BurstIQ; Faculty Member, Information and Communications Technology, University College, DU
LinkedIn: https://www.linkedin.com/in/wendycharles/
Blockchain in Life Sciences by Dr. Wendy Charles:
https://link.springer.com/book/10.1007/978-981-19-2976-2
Blockchain Compliance by Design: Regulatory Considerations for Blockchain in Clinical Research by Wendy Charles, Natalie Marler, Lauren Long & Sean Manion:
https://www.frontiersin.org/articles/10.3389/fbloc.2019.00018/full

Professor Chris Coleman, Professor, Emergent Digital Practices, Director, Clinic for Open Source Arts, CAHSS, DU
LinkedIn: https://www.linkedin.com/in/digitalcoleman/
DU Webpage: https://liberalarts.du.edu/about/people/christopher-d-coleman
The largest Digital Art & Collectible marketplace on Tezos: https://objkt.com/
Feral File commissions curated exhibitions of digital artwork and we partner with artists and institutions to explore new ways of exhibiting and collecting: https://feralfile.com/
The tezos platform for artists and collectors to live out their passion for generative art:
https://www.fxhash.xyz/

Matt Romo Nichols, Web3 Club President; Fourth-year student, DU
LinkedIn: https://www.linkedin.com/in/matthew-romo-nichols/
University of Denver Web3 Club: https://crimsonconnect.du.edu/duweb3/home/

William S. Wenzel, Esq, Owner, Red Road Legal, PC
LinkedIn: https://www.linkedin.com/in/wsw01/
Exercise Caution with Crypto Asset Securities: Investor Alert:
https://www.sec.gov/oiea/investor-alerts-and-bulletins/exercise-caution-crypto-asset-securities-investor-alert

DU CLUBS & CONNECTIONS

University of Denver Web3 Club: Join us as we dive into the world of blockchain, cryptocurrency, and everything web3. Topics ranging from NFTs, DAOs, DeFi, Societal Impacts, and much more!
Email Matt Romo Nichols to learn more about the club: Matthew.RomoNichols@du.edu

GROUPS & COMMUNITIES

Government Blockchain Association: Participate in a Working Group and make a difference! Groups are available for shaping government discussions around blockchain in Artificial Intelligence, Blockchain Application Architecture, Aviation, Cybersecurity, Energy, Healthcare, Space, Telecom and Communications, and Transportation. Students are welcome!
Learn more about the GBA: https://gbaglobal.org/

Colorado Government Blockchain Professionals: This group is for people interested in how the Blockchain impacts government agencies, departments and other public organizations. We are made up of consultants, government employees, contractors and interested parties in using and promoting government understanding and use of the Blockchain.
Learn more about the CGBP: https://www.meetup.com/en-AU/colorado-government-blockchain-professionals/

Cryptorado Community: We are a group of Blockchain, Cryptocurrency, and Distributed Ledger Technology (DLT) entrepreneurs, developers, and evangelists. Whether you are completely new, seasoned or somewhere in between, we provide everyone with a space to network, collaborate, and share wisdom. Come connect with our active and supportive local blockchain community and join us in the movement to make Colorado the center for excellence and innovation in these exciting new industries!
Learn more about the Cryptorado Community: https://www.meetup.com/en-AU/cryptorado-community/

Hyperledger Denver: Hyperledger Meetup groups have an informal relationship with Hyperledger, and make up a key part of the Hyperledger ecosystem. Participation in a Hyperledger Meetup group is open to anyone--employees of a Hyperledger member company, Hyperledger contributors and developers, and people just passionate about blockchain technology.
Learn more about the Hyperledger Denver: https://www.meetup.com/en-AU/hyperledger-denver/
Learn more about the Hyperledger Foundation mentorship program: https://wiki.hyperledger.org/pages/viewpage.action?pageId=80778789

Black Women Blockchain Council: Black Women Blockchain Council (BWBC) is a global benefit organization that aims to enhance inclusion and representation in the industry through training, mentoring, networking and visibility programs.
Learn more about the BWBC: https://www.bwbc.io/ & https://linktr.ee/BWBC

ETHDenver: ETHDenver is the largest Web3 #BUIDLathon in the world (fka hackathon) for Ethereum and other blockchain protocol enthusiasts, designers and developers. ETHDenver is a Community-Owned Innovation Festival. All event proceeds are used to #BUIDL value for our community and to realize the decentralized future.
Learn more about ETHDenver: https://www.ethdenver.com/

UNIVERSITY OF DENVER COURSES

Sturm College of Law: Introduction to the Regulation of Cryptoassets: Bitcoin, Ethereum, Libra and a host of other digital assets and protocols are attracting billions of dollars of investment, while drawing increased scrutiny from global regulators. Are cryptocurrencies a vehicle for illicit dark web activity or a pioneering technology for financial inclusion? Irrespective of differing views, blockchain technology and the digital asset transactions it enables are revolutionizing the global financial system and current regulatory frameworks seem ill-equipped to adapt. This course addresses the various U.S. federal and state regulatory authorities and regimes that govern the issuance, sale, exchange and transmission of different forms of blockchain-based digital assets, with a focus on the application of federal securities law. Other topics include: pending legislation, regulatory developments, lawsuits and technology trends that have potential to impact cryptocurrencies, other digital assets and the regulatory environments in which they operate.
Learn more about the course: https://www.law.du.edu/forms/registrar/course-description.cfm?ID=933

University College: ICT 4375: Blockchain, Cryptocurrency, and Web3 Foundations: Novel protocols, tools, and techniques are restructuring the web itself into a more distributed, trusted, and self-managing network than ever before. Welcome to Web3. This course will help students master foundational blockchain concepts and explore Web3 enabling technologies. Students will gain the ability to confidently use decentralized technologies like blockchains, cryptocurrencies, peer-to-peer apps, and more. Furthermore, students will understand how these technologies are being applied in industries around the world and why. Students will gain the ability to critically assess when Web3 technology is advantageous over other solutions both from a technical and economical perspective.
Learn more about the course: https://universitycollege.du.edu/courses/coursesdetail.cfm?degreecode=ict&coursenum=4375

University of Denver Boot Camps: FinTech Boot Camp: University of Denver FinTech Boot Camp takes a multidisciplinary approach to finance, fundamental programming, data analysis, and modern tools in cryptocurrency and blockchain. Students who complete the program can expect to be able to: 1) Model future financial performance of a company using Python and financial fundamentals; 2) Build an Ethereum blockchain and understand how transactions are validated on a distributed ledger; 3) Understand both the uses and disadvantages of a variety of machine learning algorithms and their proper application within the field of finance; and 4) Leverage machine learning to determine lending preferences and how effectively a cluster of customers would produce interest.
Learn more about the course: https://bootcamp.du.edu/fintech/

UNIVERSITY OF DENVER COURSES

Daniels College of Business: The Fourth Industrial Revolution: This course provides a practical glimpse into the future of the global and competitive nature of business. From product ideation to product deployment, this course introduces students to business's role in society in promoting sustainability as the only successful business model for delivering value to customers and stakeholders of all kinds. Key business activities such as marketing, finance and accounting, working in teams, and product/service innovation and creativity are introduced. Key 4th industrial revolution technologies such as artificial intelligence (AI), the Internet of Things (IoT), distributed ledger technology and cryptocurrency, augmented/mixed/virtual reality, additive manufacturing, and autonomous, robotics, and drones are also introduced.

Daniels College of Business: Blockchain, Cryptocurrency & FinTech: What You Need To Know: Bitcoin made blockchain technology famous, it highlighted a transformative technology that facilitates the transfer of value between two entities without a trusted 3rd party. Blockchain technology has the potential to disrupt industries, financial systems and social norms. This course will study the fundamentals of Blockchain, cryptocurrency and financial technology (FinTech). We will begin with a high-level overview on the origin and concept of money and how it is valued. It will progress through an in-depth dive into the business of Blockchain, Bitcoin, Smart-Contracts and Financial Technology. This course will expose students to the opportunities, risks and challenges an immutable, decentralized system based on consensus presents. We will explore the consequence and application of blockchain technology in decentralized applications, DAOs, non-fungible tokens (NFTs), and the Metaverse. No prior knowledge of Blockchain, Cryptocurrency, and FinTech is required to take this course.

LEARNING MATERIALS: OP-EDS/CONCEPTUAL READS

The Bitcoin Standard: The Decentralized Alternative to Central Banking: The Bitcoin Standard analyzes the historical context to the rise of Bitcoin, the economic properties that have allowed it to grow quickly, and its likely economic, political, and social implications.
Read: https://www.amazon.com/Bitcoin-Standard-Decentralized-Alternative-Central/dp/1119473861

The Infinite Machine: How an Army of Crypto-hackers Is Building the Next Internet with Ethereum: Everyone has heard of Bitcoin, but few know about the second largest cryptocurrency, Ethereum, which has been heralded as the "next internet." The Infinite Machine introduces Vitalik's ingenious idea and unfolds Ethereum's chaotic beginnings. It then explores the brilliant innovation and reckless greed the platform has unleashed and the consequences that resulted as the frenzy surrounding it grew.
Read: https://www.amazon.com/Infinite-Machine-Crypto-hackers-Building-Internet/dp/0062886142

LEARNING MATERIALS: VIDEOS & PODCASTS

Growing Pains: Cryptocurrency Crashes, the Blockchain and the Future of Finance | RadioEd
In this episode, DU Professor Joshua Ross, and Peter Vigna, a veteran journalist who pioneered coverage of cryptocurrencies at The WJS discuss the history of cryptocurrencies, what caused the recent cryptocurrency crash, what Sam Bankman-Fried did wrong, potential future applications of blockchain and cryptocurrencies, and much more.
Watch & Listen: https://www.du.edu/news/growing-pains-cryptocurrency-crashes

MIT OpenCourseWare - Blockchain and Money: This course is for students wishing to explore blockchain technology's potential use—by entrepreneurs and incumbents—to change the world of money and finance.
Watch & Listen: https://www.youtube.com/watch?v=EH6vE97qIP4&list=PLUl4u3cNGP63UUkfL0onkxF6MYgVa04Fn

Bankless : The Ultimate Guide to Crypto Finance. DeFi, NFTs, and cryptocurrencies." Bankless seeks to provide listeners with the most pertinent Web 3 information stemming from a variety of Web 3 experts. Available on Apple Podcasts, Spotify and SoundCloud, individuals can interact with podcast speakers dependent on their individual Web 3 interests.
Listen: http://podcast.banklesshq.com/

LEARNING MATERIALS: REGULATORY AND LEGAL SITE PUBLICATIONS

Uniform Laws: A link to the Uniform Law Commissions' site describing the current status of the 2022 UCC digital asset amendments on the road to becoming uniform state law. Lots of sub links with in-depth information.
Visit the Uniform Laws site: https://www.uniformlaws.org/committees/community-home?communitykey=1457c422-ddb7-40b0-8c76-39a1991651ac

U.S. Securities and Exchange Commission (SEC): One of many publications by the Securities and Exchange Commission regarding crypto-assets.
Visit the SEC site: https://www.sec.gov/oiea/investor-alerts-and-bulletins/exercise-caution-crypto-asset-securities-investor-alert

LEARNING MATERIALS :PEER-REVIEWED BLOCKCHAIN JOURNALS

Blockchain in Healthcare Today: https://blockchainhealthcaretoday.com
Blockchain Research and Applications: https://www.sciencedirect.com/journal/blockchain-research-and-applications
Blockchains: https://www.mdpi.com/journal/blockchains
Frontiers in Blockchain: https://www.frontiersin.org/journals/blockchain
IET Blockchain: https://ietresearch.onlinelibrary.wiley.com/journal/26341573
International Journal of Blockchains and Cryptocurrencies:
https://www.inderscience.com/jhome.php?jcode=ijbc
Journal of the British Blockchain Association: https://jbba.scholasticahq.com/
Stanford Journal of Blockchain Law and Policy: https://stanford-jblp.pubpub.org/

LEARNING MATERIALS: ARTICLES & BOOKS BY UNIVERSITY OF DENVER AUTHORS

Blockchain in Life Sciences by Dr. Wendy Charles

In her book*, Dr. Wendy Charles highlights the latest advances on the implementation and adaptation of blockchain technologies in real-world scientific, biomedical, and data applications. It presents rapid advancements in life sciences research and development by applying the unique capabilities inherent in distributed ledger technologies.

The book unveils the current uses of blockchain in drug discovery, drug and device tracking, real-world data collection, and increased patient engagement used to unlock opportunities to advance life sciences research. This paradigm shift is explored from the perspectives of pharmaceutical professionals, biotechnology start-ups, regulatory agencies, ethical review boards, and blockchain developers. This book enlightens readers about the opportunities to empower and enable data in life sciences. *Available to download on the DU Libraries system

Explore the Blockchain in Life Sciences Book: https://link.springer.com/book/10.1007/978-981-19-2976-2

Blockchain Compliance by Design: Regulatory Considerations for Blockchain in Clinical Research by Wendy Charles, Natalie Marler, Lauren Long & Sean Manion

As clinical research moves toward real-world data capture with increased data sharing, there is a growing need for patient-centered technologies that ensure data authenticity and promote researcher and patient access. Blockchain is one of an emerging set of distributed ledger technologies with the potential to offer both research data transparency and trust, while offering robust security measures.

As blockchain-based systems are being developed for clinical research applications, these systems may be required to follow state and federal research regulations, such as ethical protections for human participants and data privacy. Blockchain developers and research organizations alike are struggling to identify and interpret these regulatory requirements. Further, regulatory agencies and policymakers have not yet provided blockchain stakeholders with clear guidelines to achieve compliance. This article provides an introduction to the clinical research and health information privacy regulations in the United States as well as data design standards and electronic signature laws. We also offer recommendations for blockchain developers, researchers, and research organizations for achieving compliant blockchain solutions in clinical research.

Read the Blockchain Compliance Article:
https://www.frontiersin.org/articles/10.3389/fbloc.2019.00018/full

LEARNING MATERIALS: ARTICLES & BOOKS BY UNIVERSITY OF DENVER AUTHORS

Reinventing the Supply Chain A 21st-Century Covenant with America by Jack Buffington
Reinventing the Supply Chain explores the historical role of supply chains in the global economy, outlines where the system went wrong and what needs to be done to fix it, and demonstrates how a retooled supply chain can lead to the revitalization of American communities. Jack Buffington proposes a transformation of the global supply chain system into a community-based value chain, led by the communities themselves and driven by digital platforms for raising capital and blockchain technology.

Buffington proposes new solutions to problems that have been decades in the making. With clear analysis and profound insight, Buffington provides a clear roadmap to a more durable and efficient system.

Explore the Supply Chain Book: https://press.georgetown.edu/Book/Reinventing-the-Supply-Chain

Eleven Questions with Joshua Ross: Cryptocurrency & Blockchain: Daniels expert shares more on cryptocurrency and blockchain's place in U.S. banking.

Read the Crypto Blog: https://daniels.du.edu/blog/eleven-questions-with-joshua-ross-cryptocurrency-blockchain/

A Deeper Dive into Cryptocurrency With Joshua Ross: Eight more questions with the director of Entrepreneurship@DU.

Read the Crypto Blog: https://daniels.du.edu/blog/a-deeper-dive-into-cryptocurrency-with-joshua-ross/