# Blockchain and Cryptocurrency Technology Education 2018

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Bitcoin, Blockchain, and cryptocurrencies have become common terms in the last few years. They have become the subject of intense interest in fields from computer science to finance to business and law. Though the media hype and the prices have waned somewhat since the price spike at the end of 2017, the interest remains very high among the general public and in business, particularly financial technology businesses. New business and development efforts have only accelerated, increasing demand for people with knowledge in the field. And there is a corresponding demand to learn about these topics.

But these are complex topics involving a number of technologies and disciplines that don’t necessarily fit into a traditional academic department. Most universities have not yet incorporated these topics into their curriculums and there is not a standardized way to do so.

## U.S. University Computer Science Curriculums

A number of leading universities have started offering graduate computer science courses or programs related to cryptocurrency and blockchain technologies[[1]](#footnote-1). Princeton created perhaps the first and best-known course; “Bitcoin and Cryptocurrency Technologies”, which has been available through Coursera[[2]](#footnote-2) for years, though not currently offered at Princeton. The book of the same title[[3]](#footnote-3) by the course creators has become the de facto standard text for most introductory computer science courses on the topics.

Carnegie Mellon offers a special topics course[[4]](#footnote-4), cross-listed under Engineering and Public Policy and the Institute for Software Research. Universities such as Stanford, Johns Hopkins, George Mason and the University of Maryland have catalog computer science courses in cryptocurrency and blockchain technologies[[5]](#footnote-5), [[6]](#footnote-6), [[7]](#footnote-7), [[8]](#footnote-8), the latter of which is cross-listed in engineering and computer science. Cornell, M.I.T., and UC Berkeley are leaders in the field as all have multiple courses and each has a center for related studies.

Joseph Bonneau, who has developed and taught such courses at Princeton and Stanford, has said “Every university will have a blockchain course in five years. More institutions would like to each it now, but it’s a question of having a professor around to do it.”[[9]](#footnote-9) A recent conference with an academic session concluded “Even academics can’t keep pace with blockchain change”[[10]](#footnote-10).

The progression of blockchain and cryptocurrency technologies in computer science departments may well be similar to that of data science, and cybersecurity before that; a special topics course, a regular catalog course or two, then a specialization certificate and ultimately a specialized degree program.

## U.S. University Business Curriculums

Some leading U.S. universities, including Duke and NYU Stern, have created cryptocurrency-related courses in graduate business[[11]](#footnote-11) or finance[[12]](#footnote-12) programs. One of the classes at UC Berkeley is cross-listed in 3 departments; Computer Science, Business, and Law[[13]](#footnote-13).

The topics have become particularly relevant to finance programs as ICO financing continues to increase[[14]](#footnote-14). And the topics have recently become even more important to finance programs affiliated with the CFA[[15]](#footnote-15). The CFA has been particularly active in publishing on cryptocurrency topics[[16]](#footnote-16) and will be adding topics on blockchain and cryptocurrency to the Level I and Level II curriculums in 2019[[17]](#footnote-17).

Many leading MBA programs have added courses or are in the process of adding courses to their curriculums. Kevin Webach, a professor at the University of Pennsylvania’s Wharton School said “There will be a real phenomenon in business for the foreseeable future, and five years down the road there won't be too many major business schools that don't offer similar classes.”[[18]](#footnote-18).

## Online Open Enrollment Paid Programs

There is also a huge market for online, independent learning in the field, apart from traditional degree-granting institutions. In addition to free online courses, companies such as Udemy[[19]](#footnote-19), [[20]](#footnote-20) and Blockgeeks[[21]](#footnote-21) are booming with many dozens of paid online courses related to blockchain and cryptocurrency. Traditional institutions such as MIT[[22]](#footnote-22), the London School of Economics[[23]](#footnote-23) and Oxford[[24]](#footnote-24) are also offering paid online courses in cryptocurrency investing.

## Summary

Blockchain and Cryptocurrencies are important new topics for which the educational demand is very strong and growing, in both traditional and non-traditional academic programs.

## August 2018 Updates

On August 28, 2018 Coinbase research published a report with the results of a survey that they had done of the top 50 universities worldwide. (<https://blog.coinbase.com/the-rise-of-crypto-in-higher-education-81b648c2466f>)

They found that 42% of those top universities worldwide, and a higher percentage of those top US universities, were offering cryptocurrency courses. A number of leading US universities were offering multiple courses, and typically the demand exceeded course capacity.

And on August 31, Cointelegraph published an article noting that the cryptocurrency job market had continued to show increases regardless of price volatility. (<https://cointelegraph.com/news/blockchain-job-industry-sees-sustained-uptick-despite-volatile-crypto-markets>)

1. https://www.nytimes.com/2018/02/08/technology/cryptocurrencies-come-to-campus.html [↑](#footnote-ref-1)
2. https://www.coursera.org/learn/cryptocurrency/ [↑](#footnote-ref-2)
3. http://bitcoinbook.cs.princeton.edu/ [↑](#footnote-ref-3)
4. https://cmu.app.box.com/s/zjvqn8ne12sjwqmtvev2w49s78ij5sm5/file/165955147437 [↑](#footnote-ref-4)
5. https://crypto.stanford.edu/cs251/syllabus.html [↑](#footnote-ref-5)
6. http://www.cs.jhu.edu/~abhishek/classes/CS601-641-441-Spring2018/class.html [↑](#footnote-ref-6)
7. http://www.baldimtsi.com/teaching/cs795\_sp17 [↑](#footnote-ref-7)
8. https://docs.google.com/document/d/1HN-I0\_u0smAtxupM3vP9GWVsRVYB1f\_oVG0f2oLUU88/edit [↑](#footnote-ref-8)
9. https://www.ft.com/content/2d161cf6-c3b1-11e7-b30e-a7c1c7c13aab [↑](#footnote-ref-9)
10. https://www.coindesk.com/consensus-2017-even-academics-cant-keep-pace-with-blockchain-change/ [↑](#footnote-ref-10)
11. https://faculty.fuqua.duke.edu/~charvey/Teaching/897\_2018/897\_Topics.htm [↑](#footnote-ref-11)
12. http://pages.stern.nyu.edu/~dyermack/courses/Hinkes-Yermack%20Spring%202018.pdf [↑](#footnote-ref-12)
13. https://berkeley-blockchain.github.io/cs294-144-s18/ [↑](#footnote-ref-13)
14. https://cryptovalley.swiss/wp-content/uploads/20180628\_PwC-S-CVA-ICO-Report\_EN.pdf [↑](#footnote-ref-14)
15. https://www.cfainstitute.org/about/universities/university-affiliation [↑](#footnote-ref-15)
16. https://blogs.cfainstitute.org/investor/2018/04/03/cryptocurrencies-the-rise-of-decentralized-money/ [↑](#footnote-ref-16)
17. https://www.bloomberg.com/news/articles/2018-07-16/cfa-exam-adds-crypto-blockchain-topics-as-wall-street-dives-in [↑](#footnote-ref-17)
18. https://www.cnbc.com/2018/04/05/top-mba-programs-beef-up-cyrptocurrency-courses-to-keep-up-with-demand.html [↑](#footnote-ref-18)
19. https://www.udemy.com/courses/search/?q=blockchain&src=sac&kw=blockchain [↑](#footnote-ref-19)
20. https://www.udemy.com/courses/search/?q=cryptocurrency&src=sac&kw=cryptocurrency [↑](#footnote-ref-20)
21. https://blockgeeks.com/ [↑](#footnote-ref-21)
22. https://executive.mit.edu/openenrollment/program/blockchain-technologies-business-innovation-and-application/#.W18oplBKiM8 [↑](#footnote-ref-22)
23. https://onlinelearning.lse.ac.uk/lse-cryptocurrency-investment-and-disruption-online-certificate-course-hm/ [↑](#footnote-ref-23)
24. https://www.udemy.com/cryptocurrency-investing/ [↑](#footnote-ref-24)