Computer Science and Business (CSB)

Courses

CSB 242 Blockchain Concepts and Applications 3 Credits
Blockchain is the technology underlying Bitcoin, along with other
digital currencies, and a data-management technology applicable
broadly in finance, accounting, marketing, supply-chain, and "smart"
contracts. It offers the ability to decentralize financial transactions,
automate record keeping, and increase privacy. This course gives
students the basis for understanding the technological foundations of
blockchain and the business impact of blockchain.
Prerequisites: ECO 001 and (BIS 111 or CSE 003 or CSE 007 or
CSE 012) and (CSE 017 or MKT 111 or FIN 125 or SCM 186)

CSB 256 Computing/Business Seminar 3 Credits
Business, technical, and cultural aspects of developing, managing,
and marketing computing products from the perspectives of
researchers, developers, and management. Influences of patents,
open source, corporate- and government-funded research, and
standards. Case studies show why the best technology may not
always win, unexpected impact of technical disruptions, advantages
and pitfalls of technical leadership versus "following aggressively",
etc. Studies include startups, mature companies, corporate R&D labs,
and academic labs. Course relates to both specific computer-related
technology, and current business events.
Prerequisites: ECO 001 and (CSE 109 or CSE 241 or CSE 341)

CSB 273 Leveraging Technology 3 Credits
Explores the types and manner in which technology can improve
business outcomes. Lectures and assigned readings cover topics
such as business context for leveraging technology, various common
and disruptive technologies, and estimating ROI. Using consulting
gagements and/or real-world scenarios, students develop and
present proposals based on their acquired knowledge. Emphasis is
placed on learning how to discover opportunities, determine
technologies to address those opportunities, and correlate the
application of technology to business metrics to garner the support of
decision-makers.
Repeat Status: Course may be repeated.
Prerequisites: CSE 012 or CSE 017 or BIS 111

CSB 304 (ENTP 304) Technology and Software Ventures 3 Credits
Designed from the perspective of functional leaders, course provides
a holistic perspective of developing successful software ventures
across various industries in an interdisciplinary and experiential
environment. Students develop a software-oriented idea, concurrent
with module delivery containing best practices, case studies, and
subject-matter experts. Examines business model fundamentals,
customer discovery, translating requirements to a minimum viable
product, agile development, user acquisition, and traction. ENTP
Capstone. Prior programming experience or technical background not
required. Open to students in any college and major.
Prerequisites: ENTP 101 or CSE 002 or BIS 111

CSB 311 Advanced Accounting Information Systems 3 Credits
Application of computer technology to accounting information
systems. Transaction processing systems that support the revenue,
conversion, and expenditure cycles of manufacturing, service, and
retail business organizations. Topics include process modeling,
data modeling, internal controls, corporate IT governance, IT audit
techniques, SAP and application of Generalized Audit Software.
Prerequisites: (ACCT 152 or ACCT 108) and (CSE 241 or CSE 341)
Can be taken Concurrently: CSE 241, CSE 341

CSB 312 Design of Integrated Business Applications I 3 Credits
Integrated Product Development (IPD) Capstone I. Industry-
based business information systems design project. Information
systems design methodology, user needs analysis, project feasibility
analysis of design alternatives, and integrated product development
methodology. Formal oral and written presentations to clients.
Prerequisites: CSB 311 and (CSE 241 or CSE 341) and CSE 216
Can be taken Concurrently: CSB 311

CSB 313 Design of Integrated Business Applications II 3 Credits
Integrated Product Development (IPD) Capstone Course II. This
course extends the industry-based project initiated in CSB 312 into its
implementation phase. Detailed design, in-house system construction
and delivery, commercial software options, and systems maintenance
and support. The practical component of the course is supplemented
by several classroom-based modules dealing with topics that lie at the
boundary of computer science and business. Formal, oral, and written
presentations to clients.
Prerequisites: CSB 312

CSB 314 International Practicum 3 Credits
A faculty led, foreign-based activity to provide students the opportunity
to work on consulting, assurance, or other IT–related projects with
business organizations, consulting companies, and public accounting
firms. Typical projects: systems analysis and design, systems
configuration and implementation, database design, user interface
design, and internal control assessment. Students complete written
reports and make formal presentations to client firms.

CSB 389 Honors Project 1-12 Credits

CSB 392 Independent Study 1-3 Credits
An intensive study, with report, of a topic spanning both business and
computer science that is not treated in any other courses.
Repeat Status: Course may be repeated.

CSB 442 Blockchain: Mathematical Foundations and Financial
Applications 3 Credits
Technical and mathematical foundations of blockchain (algorithms,
data structures, cryptography) with application to finance. Blockchain
properties (immutability, irrefutability), security, consensus (proof-of-
work, proof-of-stake, Byzantine consensus). Blockchain governance
and trust models. Blockchain and finance: policy, regulation,
compliance, systemic risk, relative power of nation-states, the role
of central banks, economic justice. Broader impacts in such areas
as foreign policy, surveillance and individual freedoms, non-financial
applications. Smart contract coding and issues in blockchain software
development. Lab experience interacting with a blockchain.
Prerequisites: MATH 021 and FIN 125 and (CSE 007 or CSE 012 or
CSE 017)