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## MEMORANDUM

**To:** Donna E. Shalala, President

**From:** Tomas A. Salerno  
Chair, Faculty Senate

**Date:** February 27, 2015

A handwritten signature in blue ink, appearing to read 'TAS' followed by a stylized surname.

**Subject:** Faculty Senate Legislation #2014-17(B) – Name Change of a *Minor in Computer Information System* to a *Minor in Business Technology*, School of Business Administration

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The Faculty Senate, at its February 25, 2015 meeting, voted unanimously to approve the School of Business Administration proposal to change of name of the *minor* in Computer Information Systems Department to a *minor* in Business Technology Department. The rationale is that the proposed name change will more accurately reflect a more updated role of this department and appeal to the incoming students.

This legislation is now forwarded to you for your action.

TAS/rh

Enclosure

cc: Thomas LeBlanc, Executive Vice President and Provost  
Eugene Anderson, Dean, School of Business Administration  
Ann Olazábal, Vice Dean, School of Business Administration

**CAPSULE:** Faculty Senate Legislation #2014-17(B) – Name Change of a *Minor in Computer Information System* to a *Minor in Business Technology*, School of Business Administration

APPROVED: D. Anderson DATE: 03/06/2015  
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: Dean Anderson

EFFECTIVE DATE OF LEGISLATION: IMMEDIATELY  
(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: \_\_\_\_\_

REMARKS (IF NOT APPROVED): \_\_\_\_\_

## Proposal for CIS Department (and major and minor) Name Change to Business Technology

Proposal: Change the department -- as well as its undergraduate major and minor -- name from Computer Information Systems to "Business Technology".

Rationale: The existing name no longer reflects the role, stature and scope of technology in the enterprise. The department was founded in 1987 as a spin off from MAS. At that time computers were still used for computation at the transaction processing level and information systems reflected the systems analysis and design aspect of the disciplines role in the organization. The data centric systems were viewed as corporate cost centers rather than value centers and the term Chief Information Officer was not used to describe the lead officer of the technology area. From a business perspective firms like Microsoft, Dell, Oracle were just being born and the firms we now rely on Amazon, Google and Facebook were not even created.

Today, businesses can no longer function without technology; their strategies and competitive strengths are more than ever dictated to by their use of technology and its manipulation on many fronts: mobile; cloud; desktop; big data; analytics and enterprise to name just a few. As such the name Computer Information Systems has little relevance to students and a negative dated connotation with firms; students and entrepreneurs. The term Business Technology is business-centric, captures executive issues such as: governance; CIO performance; technology-strategy, as well as undergraduate topics such as programming; app development; informatics and advanced topics such as cloud development; and development of Big Data systems architectures.

We believe that this change will capture the imagination of student; industry and alumni and place the newly titled department and its courses at the center of that ecosystem. There is little consensus on names for departments (see FT50 List attached), but CMU set a precedent in 2013 when it changed the department name from CIT to the Department of Business Technology.

**Carnegie Mellon Tepper**  
SCHOOL OF BUSINESS

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## BUSINESS TECHNOLOGY (FORMERLY COMPUTING AND INFORMATION TECHNOLOGY)

View or download complete presentation (pdf): [Business Technology Track \(formerly Computing and Information Technology\)](#)

Please note that this track was revised as shown in Fall 2013, and as shown in the University's current Undergraduate Catalog. Students in the Class of 2014 may still use the previously listed courses to complete the track. Other students who have taken these courses to fulfil requirements (up to and including Fall 2013) may still apply those courses to the track. Please consult your academic advisor to verify and update your academic audit.

### REQUIRED COURSES

- 70-453 Business Technology Consulting (new title)
- 70-455 Modern Data Management

### Select four additional courses from the following list:

- 15-121 Introduction to Data Structures
- 36-315 Statistical Graphics and Visualization
- 70-339 Information Technology for Finance
- 70-443 Digital Marketing and Social Media Strategy
- 70-449 Social, Economic & Information Networks
- 70-465 Technology Strategy
- 70-488 Interactive Marketing (6 units)
- 70-643 Publishing on the World Wide Web
- 88-223 Decision Analysis & Decision Support Systems

### Track Advisor

**Dr. Wolfgang Gatterbauer**  
Assistant Professor in Business Technology  
354 Posner  
8-8642  
[gatt@cmu.edu](mailto:gatt@cmu.edu)

**FOCUS ON THE TRACK**

**Spring 2014 Course Highlights**

**70-339**  
**Information Technology for Finance**  
(70-339 Course Description PDF)

**Professor Param Singh**



"Students will learn how to use the information emanating from financial markets for decision making and building systematic computer-based models for trading."

## FT Top 50 School and their Technology related Departments

<a href="#">Harvard Business School</a>	Technology & operations management
<a href="#">Stanford Graduate School of Business</a>	Operations, Information & technology
<a href="#">University of Pennsylvania: Wharton</a>	operations and information management
<a href="#">London Business School</a>	Management Science and operations
<a href="#">Columbia Business School</a>	
<a href="#">Insead</a>	Technology and Operations Management
<a href="#">Iese Business School</a>	Information Systems
<a href="#">Hong Kong UST Business School</a>	Information Systems, Business Statistics and Operations Management
<a href="#">MIT: Sloan</a>	The MIT Center for Digital Business
<a href="#">University of Chicago: Booth</a>	Department of computer science
<a href="#">IE Business School</a>	Information Systems & technology
<a href="#">University of California at Berkeley: Haas</a>	Operations and Information technology Management
<a href="#">Northwestern University: Kellogg</a>	Accounting Information & management
<a href="#">Yale School of Management</a>	
<a href="#">Ceibs</a>	
<a href="#">Dartmouth College: Tuck</a>	Glassmeyer/McNamee Center for Digital Strategies
<a href="#">University of Cambridge: Judge</a>	
<a href="#">Duke University: Fuqua</a>	Management and organization
<a href="#">IMD</a>	
<a href="#">New York University: Stern</a>	management and organization
<a href="#">HEC Paris</a>	Operations and Information technology Management
<a href="#">Esade Business School</a>	
<a href="#">UCLA: Anderson</a>	Decisions, Operations & Technology Management
<a href="#">University of Oxford: Said</a>	
<a href="#">Cornell University: Johnson</a>	Management Information Systems
<a href="#">Indian Institute of Management, Ahmedabad</a>	Information Systems
<a href="#">CUHK Business School</a>	
<a href="#">Warwick Business School</a>	information systems and management
<a href="#">Manchester Business School</a>	school of computer science
<a href="#">University of Michigan: Ross</a>	management and organization
<a href="#">University of Hong Kong</a>	
<a href="#">Nanyang Business School</a>	Information Technology & Operations Management
<a href="#">Rotterdam School of Management, Erasmus University</a>	Management of Technology & Innovation
<a href="#">Indian School of Business</a>	Operations and Technology
<a href="#">University of Virginia: Darden</a>	technology and operations management
<a href="#">National University of Singapore Business School</a>	
<a href="#">Rice University: Jones</a>	Information Technologies
<a href="#">Cranfield School of Management</a>	
<a href="#">SDA Bocconi</a>	
<a href="#">City University: Cass</a>	
<a href="#">Georgetown University: McDonough</a>	
<a href="#">Imperial College Business School</a>	
<a href="#">Carnegie Mellon: Tepper</a>	Business Technology
<a href="#">University of Illinois at Urbana-Champaign</a>	information systems and information technology
<a href="#">University of North Carolina: Kenan-Flagler</a>	
<a href="#">University of Toronto: Rotman</a>	Operations Management and Statistics
<a href="#">University of Texas at Austin: McCombs</a>	Department of IROM
<a href="#">Australian Graduate School of Management (AGSM)</a>	
<a href="#">Emory University: Goizueta</a>	Information Systems and Operation Management
<a href="#">University of Maryland: Smith</a>	DECISION, OPERATIONS & INFORMATION TECHNOLOGIES

## Proposals to Revise Undergraduate CIS Curriculum for CIS Major in both BBA and BSBA, and CIS Minor

### Executive Summary

The CIS faculty propose to:

1. Move the department's required foundational course in the Undergraduate Business Curriculum to the 200 level. CIS 410 Information Systems & Technology would be eliminated from the business core, and CIS 210 Business Technology & Innovation would replace it.
2. The Curriculum for the CIS major in both the BBA and BSBA degree programs would be revamped both substantively and cosmetically with the objectives of making the content more cutting edge and adding more advanced coursework within the undergraduate major, and to use more current terminology for existing courses that remain relevant.
3. The Curriculum of the CIS minor would be revamped substantively to give the students a set of courses and choice options that are cutting edge and relevant to business.

## I. Foundational Class: CIS 410: Information Systems and Technology

Proposal: Change the level of CIS 410 to a 200 level class.

Rationale: The existing course comes very late in the undergraduate study path. This has the side effect of limiting undergraduates exposure to technology and consequently from making a decision to select CIS as a major-minor. It also limits their aperture into technology as a career option. By moving the course to a 200 level class, to be taken in the freshmen or junior year, students could more fully understand the potential of technology as a study and career path.

Curriculum content change. The course is currently a high level view of MIS in the enterprise. The proposed change would be to make the course more 'hands on' including content that includes basic web-app-cloud application development, an overview of MIS would also be undertaken to ensure contextualization of the applications to be achieved.

## II. Curriculum BBA & BSBA

**Proposal:** Change the curriculum for both the Major and the Minor, in addition create tracks for the BA and BSBA.

**Rationale:** The existing current curriculum is dated and overdue a refresh.

**Curriculum content change.** The content of existing classes has been examined and updated during the Fall and Spring 2014 semesters. New classes have been added in several areas:

- Entrepreneurship Launching High tech ventures (CIS 499). This course has been cross listing this with MGT and IEN to create a unique cross schools technology-innovation class.
- Legal Informatics. This innovative cutting edge course has been added as a cross listed course from the Law School, the only course to do so in the Business School.
- C++ & Java have been offered in place of Visual Basic. Taught by Dr. Tarek Sayed who recently left Microsoft after 15 years, in spring 2014 the C++ has 60 students and is oversubscribed by 20.

What follows is a market analysis of other programs. Faculty are enthusiastic about offering a program that is competitive even with some of the extant graduate programs at our aspirational peer institutions.

## Aspirational Peer School Curricula for Comparison

University	UG/Grad	Program Name	Courses List
<b>Wharton</b>	<b>UG</b>	<b>BS</b>	<p><b>Concentration (Managing Electronic Commerce)</b></p> <p>Required:</p> <p>OPIM 311: Business Computer Languages (or suitable higher-level technology course with approval from the concentration advisor)</p> <p>OPIM 469: Advanced Topics in Information Strategy</p> <p>Plus one of:</p> <p>MGMT 223: Business Strategy</p> <p>MGMT 264: Venture Capital &amp; Entrepreneurial Management</p> <p>Plus one CU of electives chosen from the following:</p> <p>FNCE 250: Venture Capital and Private Equities</p> <p>LGST 222: Law of E-Commerce</p> <p>MGMT 223: Business Strategy</p> <p>MGMT 237: Management of Technology</p> <p>MGMT 264: Venture Capital &amp; Entrepreneurial Management</p> <p>MKTG 227: Marketing Electronic Commerce (0.5 CU)</p> <p>OPIM 314: Enabling Technologies</p> <p>OPIM 316: Systems Analysis and Design</p> <p>BPUB 290: Technology in Global Markets (0.5 CU)</p>
<b>Wharton</b>	<b>UG</b>	<b>OPERATIONS &amp; INFORMATION MANAGEMENT CONCENTRATION</b>	<p><b>Information Systems (IS)</b></p> <p>Required:</p> <p>OPIM 210: Management Information Systems</p> <p>Plus 3 CUs from:</p> <p>OPIM 105x: Developing Tools for Data Access and Analysis</p> <p>OPIM 224: Service Operations Management</p> <p>OPIM 290: Decision Processes</p> <p>OPIM 311: Business Computer Languages</p>

- OPIM 314: Enabling Technologies
- OPIM 315: Data Base Management Systems
- OPIM 316: Systems Analysis, Design, and Implementation
- OPIM 319: Seminar in Decision Systems
- OPIM 325: Computer Simulation Models
- OPIM 410: Decision Support Systems
- OPIM 469: Advanced Topics in Information Strategy and Economics

**Business Analytics (BA)**

Any of the following courses may be included in the BA track:

- OPIM 105: Developing Tools for Data Access and Analysis
- OPIM 290: Decision Processes
- OPIM 311: Business Computer Languages
- OPIM 315: Data Base Management Systems
- OPIM 316: Systems Analysis, Design, and Implementation
- OPIM 319: Seminar in Decision Systems
- OPIM 321: Management Science
- OPIM 325: Computer Simulation Models
- OPIM 353: Mathematical Modeling and its Application in Finance
- OPIM 399: Independent Study on Business Analytics
- OPIM 410: Decision Support Systems

Also, a maximum of two of the following courses from outside OPIM may be included:

- ESE 303: Stochastic Systems Analysis and Simulation
- ESE 304: Optimization Techniques
- ESE 501: Multicriteria Decision Making
- MKTG 271: Models and Tools for Marketing Tactics and Strategy
- MKTG/STAT 476: Applied Probability Models in Marketing
- MUSA 504: Business Geographics
- STAT 430: Probability
- STAT 432: Mathematical Statistics
- STAT 434: Financial and Economic Time Series

<b>Boston College</b> UG	<b>Information Systems Concentration</b> <ul style="list-style-type: none"> <li>Required Courses               <ul style="list-style-type: none"> <li>MI 157 Introduction to Programming for Management (or CS 101)</li> <li>MI 257 Database Systems and Applications</li> <li>MI 258 Systems Analysis and Design</li> </ul> </li> <li>One additional MI course level 100 or above</li> <li><b>Electives include:</b> <ul style="list-style-type: none"> <li>MI 161 Customer Relationship Management</li> <li>MI 205 Undergrad TechTrek</li> <li>MI 253 E-Commerce</li> <li>MI 255 Managing Projects</li> <li>MI 266 Technology and Society</li> <li>MI 267 Technology and Culture</li> <li>MI 330 Business Creation</li> <li>MI 340 Introduction to Analytics and Business Intelligence</li> <li>MI 618 Accounting Information Systems</li> <li>MI 620 Marketing Analytics</li> <li>MI 621 Social Media and Web 2.0</li> <li>MI 635 New Media Industries</li> <li>MI 641 Info Systems, Security Management &amp; Forensics</li> </ul> </li> </ul>
<b>Carnegie Mellon</b> UG	<b>Business Technology</b> <p><b>REQUIRED COURSES</b></p> <ul style="list-style-type: none"> <li>• 70-453 Business Technology Consulting (new title)</li> <li>• 70-455 Modern Data Management</li> </ul> <p>Select four additional courses from the following list:</p> <ul style="list-style-type: none"> <li>• 15-121 Introduction to Data Structures</li> <li>• 36-315 Statistical Graphics and Visualization</li> <li>• 70-339 Information Technology for Finance</li> <li>• 70-443 Digital Marketing and Social Media Strategy</li> <li>• 70-449 Social, Economic &amp; Information Networks</li> <li>• 70-465 Technology Strategy</li> <li>• 70-488 Interactive Marketing (6 units)</li> <li>• 70-643 Publishing on the World Wide Web</li> <li>• 88-223 Decision Analysis &amp; Decision Support Systems</li> </ul>

Carnegie Mellon (Heinz)	Grad	Master of Info. Sys. Mgmt	<p><b>Offerings:</b> Acting for Management; Advanced Business Analytics; Advanced Database Management; Advanced Telecommunications Technologies and Management; Algorithms and Data Structures for Information Processing; Analytics &amp; Business Intelligence; Business English; Business Intelligence and Data Mining SAS; Business Process Modeling; Consulting Communications; Corporate Finance; Cybersecurity in Critical Infrastructure; Data Mining I; Data Structures for Application Programmers Data Warehousing; Database Management; Decision Analysis and Multi-Criteria Decision Making; Decision Making Under Uncertainty; Defensive Hacking: A Tactical &amp; Strategic Perspective; Design &amp; Policy for Humanitarian Impact; Digital Marketing Analytics Digital Transformation; Distributed Systems; E&amp;TIM Seminar: Innovation Management in Practice; E-Business Management: A Strategic Perspective; E-Business Technology and Management; E-Commerce Technologies; Economic Analysis; Enterprise Architectures; Entrepreneurship; Ethical Issues In Management; Exploring and Visualizing Data; Financial Accounting (Financial Statement Literacy and Analysis); Financial Modeling and Analysis; Global eBusiness Strategy; Global IT Management &amp; Sourcing; Growth with Intelligent Transportation; Health Care Geographical Information Systems; Health Care Information Security; Health Care Information Systems; Health Economics; Heuristic Problem Solving; Human Resources Management; Information Security Project; Information Security Risk Analysis; Information Security Risk Policy &amp; Management; Information Systems Project; Innovation &amp; Technology; Interactive Marketing; Intermediate Java; International Policy Decision Modeling; Internet Security; Internet Technologies; Introduction to Geographic Information Systems; Introduction to Information Security Management; Introduction to Raster GIS; Introduction to Supply Chain Management and Systems; Introduction to the ITIL Framework; IT Business Leadership; IT Global Sourcing; IT Project Management; Labor Economic Policy; Large Scale Data Analysis for Public Policy; Lean Entrepreneurship; Linux &amp; Open Source Management Consulting; Managing Analytics Projects; Managing Quality Improvement Measurement &amp; Analysis Social Media Initiatives; Mobile Commerce; Multi-Media; Negotiation; Network Security Analysis; Object Oriented Analysis &amp; Design; Object Oriented Programming in Java; Organizational Change: Transition And Transformation; Organizational Management: Theory And Practice; Power And Influence; Principles of Finance; Privacy in the Digital Age; Product Management in Information Technology; Professional Speaking; Professional Writing; Programming in R Analytics; Project Management; SAS for Policy Analysis; Service Management; Service Oriented</p>
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			Architecture; Spreadsheet Modeling and Analysis for Management Decision Making; Statistics for IT Managers; Strategic Management and Implementation; Strategic Planning; Strategic Presentation Skills; Strategy Development; Survey Sampling Methods; Tech Startup: Tools and Techniques; Technology Consulting in the Community; Technology for International Development; Telecommunications Management; Text Analytics; The Art & Science of Business Analytics; The Strategy and Management of Technological Innovation; Transformational Leadership for Global Enterprises
<b>USC Marshall</b>	n/a	<b>Certification in Technology Commercialization</b>	<p><b>Required:</b></p> <p>Technology Feasibility Technology Commercialization Investing in New Ventures</p> <p><b>[Electives :]</b></p> <p>Cases in New Venture Management Management of Rapidly Growing Ventures Engineering Project Management Invention and Technology Development Strategic Management of Technology Strategies in High-Tech Businesses</p>
<b>University of Rochester Simon SB</b>	Grad	<b>MBA (Computers and Information Systems)</b>	<p><b>Required core courses, plus four other courses:</b></p> <p>CIS 413 The Economics of Information Management At least one of: CIS 415 Business Process Analysis and Design (ECM 415) CIS 416 Advanced Information Technology (ECM 416)</p> <p><b>The remaining two courses can be selected from this list:</b></p> <p>ACC 438 Auditing II—Auditing and Information Systems CIS 418 Business Modeling and Analysis for Management CIS 440 Electronic Commerce Strategy (ECM 440) CIS 446 Financial Information Systems (FIN 446) CIS 512 Advanced Topics in Database Design ECM 437 Marketing on the Internet (MKT 437) MKT 436 Database Marketing (ECM 436)</p>

Emory Goizueta	UG	BBA	<p><b>FOUR of the following courses:</b></p> <p>352 - Project Management and Collaboration 355 - Appcology: New Commerce Infrastructure 358 - Data Analytics and Visualization 359 - Innovation in a World Gone Digital 450G - Foundations of Digital Enterprises and Markets 451 - Making Effective Decisions 452 - Healthcare Operations &amp; Technology Management 453 - Operations Strategy 455 - Forecasting &amp; Predictive Analytics 456 - Special Topics: Social Media and Virtual Communities 457 - Economics and Psychology of Political Violence and Terrorism 458 - Psychology of Technology 459 - Process Analysis and Six Sigma</p> <p><b>May substitute ONE of the following related courses for an elective:</b></p> <p>342 - Marketing Research and Customer Insights (Marketing) 423 - Investments (Finance) 430 - Industry &amp; Competitor Analysis (O&amp;M) 432 - Negotiations (O&amp;M) 433 - Leading and Managing Change (O&amp;M) <b>Approved computer science class</b></p>
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### CIS - BBA Track

The BBA track is intended to produce students with a wide set of skills ranging from programming to web development. They will be particularly attractive corporate recruiters such as Burger King, Bacardi, and ADT; consulting firms such as Deloitte and healthcare providers.

Details of the required and elective coursework for the CIS major that will be available to those pursuing the BBA degree, and a comparison to the “old” curriculum, are set forth in an attached Table 1.

### CIS - BSBA Track

The BS track, being more technical, prepares students for careers with corporations, consultants and technology firms that are looking for strong skills in the areas of Big Data, internet architectures and programming in addition to a strong grasp of technology fundamentals. Target companies include: Microsoft, Google, Facebook; Deloitte, Booz Allen, Accenture, IBM, SAP, KPMG.

Details of the required and elective coursework for the CIS major that will be available to those pursuing the BSBA degree, and a comparison to the “old” curriculum, are set forth in an attached Table 2.

### Minor in CIS

The minor in CIS will appeal to any University student who wishes to add a strong grounding in technology to their existing program of study.

Details of the required and elective coursework for the CIS minor, and a comparison to the “old” curriculum for the minor, are set forth in an attached Table 3.

<b>Required in Current CIS major for BBA (24 credits)</b>		<b>Required in Proposed CIS Major for BBA (12 credits)</b>	
CIS 320	Introduction to Programming	CIS 320	Introduction to Programming
CIS 324 (pr 320)	Object-oriented Programming	CIS 417	Special Topics: Fundamentals of IT Project Management
CIS 360	Systems Analysis, Design & Implementation	CIS 400 (pr 320)	Web-Mobile-Cloud
CIS 361	Design of Information Systems	CIS 423 (pr 320/324)	Database Management Systems
CIS 423 (pr 320/324)	Database Management Systems	<b>Electives (6 credits required for new BBA major in CIS)</b>	
CIS 430 (pr 320)	Business Telecommunications	CIS 324 (pr 320)	Object-oriented Programming
CIS 465	Applied Software Project Devt	CIS 360	Systems Analysis, Design & Implementation
CIS 494	Web Application Technologies	CIS 389	Special Topics: Launching High Tech Ventures
<b>Electives (3 credits required for BBA major in CIS)</b>		CIS 412	Foundations of Business Enterprise Technologies
CIS 391	Special Topics: Launching High Tech Ventures	CIS 401	Computers in an Inter-networked Society
CIS 430 (pr 320)	Business Networks (formerly Telecommunications)	CIS 413	Big Data Strategy
CIS 450	Health Informatics	CIS 430 (pr 320)	Business Networks (formerly Telecommunications)
CIS 465 (pr 320)	Application Software Development (former Web Application Development)	CIS 450	Health Informatics
CIS 497	Special Topics: Legal Informatics	CIS 465 (pr 320)	Application Software Development (former Web Application Development)
CIS 523 (pr 320 & 423)	Big Data Development (fka Advanced Database Management Systems)	CIS 497	Special Topics: Legal Informatics
CIS 524 (pr 324)	Mobile Apps Devt (Design of Information Systems)	CIS 523 (pr 320 & 423)	Big Data Development (fka Advanced Database Management Systems)
CIS 535 (pr 320 & 430)	Information Security (Computer Comm. Security)	CIS 524 (pr 324)	Mobile Apps Devt (Design of Information Systems)
CIS 565 (pr 320 or 324)	Mobile to Cloud: Developing Distributed Applications (Applied Software Project Devt)	CIS 535 (pr 320 & 430)	Information Security (Computer Comm. Security)
CIS 390-399, 490-498	Selected Topics in CIS	CIS 565 (pr 320 or 324)	Mobile to Cloud: Developing Distributed Applications (Applied Software Project Devt)
CIS 499	CIS Directed Study	CIS 390-399, 490-498	Selected Topics in CIS
CIS 550	CIS Internship	CIS 499	CIS Directed Study
		CIS 550	CIS Internship
Total: 27 credit hours		Total: 18 credit hours	

TABLE 1

KEY:	existing required course
	existing elective
	existing elective needing new title & description
	new course

<i>Required in current CIS major for BSBA (21 credits)</i>		<i>Required in proposed CIS major for BSBA (21 credits)</i>	
CIS 320	Introduction to Programming	CIS 320	Introduction to Programming
CIS 324 (pr 320)	Object-oriented Programming	CIS 324 (pr 320)	Object-oriented Programming
CIS 360	Systems Analysis, Design & Implementation	CIS 417	Special Topics: Fundamentals of IT Project Management
CIS 361	Design of Information Systems	CIS 400 (pr 320)	Web-Mobile-Cloud
CIS 423 (pr 320/324)	Database Management Systems	CIS 423 (pr 320/324)	Database Management Systems
CIS 430 (pr 320)	Business Telecommunications	<b>Electives (6 credits required for new BSBA major in CIS)</b>	
CIS 465	Applied Software Project Devt	CIS 360	Systems Analysis, Design & Implementation
CIS 494	Web Application Technologies	CIS 389	Special Topics: Launching High Tech Ventures
<b>Electives (3 credits required for BSBA major in CIS)</b>		CIS 412	Business & Enterprise Technologies
CIS 391	Special Topics: Launching High Tech Ventures	CIS 401	Computers in an Internetworked Society
CIS 430 (pr 320)	Business Networks (formerly Telecommunications)	CIS 413	Big Data Strategy
CIS 450	Health Informatics	CIS 430 (pr 320)	Business Networks (formerly Telecommunications)
CIS 465 (pr 320)	Web Application Development (fka Application Software Development)	CIS 450	Health Informatics
CIS 593	Special Topics: Fundamentals of IT Project Management	CIS 465 (pr 320)	Web Application Development (fka Application Software Development)
CIS 497	Special Topics: Legal Informatics	CIS 497	Special Topics: Legal Informatics
CIS 523 (pr 320 & 423)	Big Data Development (Advanced Database Management Systems)	CIS 523 (pr 320 & 423)	Big Data Development (Advanced Database Management Systems)
CIS 524 (pr 324)	Mobile Apps Devt (Design of Information Systems)	CIS 524 (pr 324)	Mobile Apps Devt (Design of Information Systems)
CIS 535 (pr 320 & 430)	Information Security (Computer Comm. Security)	CIS 535 (pr 320 & 430)	Information Security (Computer Comm. Security)
CIS 565 (pr 320 or 324)	Mobile to Cloud: Developing Distributed Applications (Applied Software Project Devt)	CIS 565 (pr 320 or 324)	Mobile to Cloud: Developing Distributed Applications (Applied Software Project Devt)
CIS 390-399, 490-498	Selected Topics in CIS	CIS 390-399, 490-498	Selected Topics in CIS
CIS 499	CIS Directed Study	CIS 499	CIS Directed Study
CIS 550	CIS Internship	CIS 550	CIS Internship

Total: 24 credit hours

TABLE 2

Total: 18 credit hours

KEY:	existing required course	existing elective	existing course in BSBA core
	existing course requiring new title and description	new course	

<i>Required in current CIS minor (any degree)</i>		<i>Required in proposed CIS minor (any degree)</i>	
CS 320	Introduction to Programming	CIS 320	Introduction to Programming
CS 360	Systems Analysis, Design & Implementation	CIS 412	Fundamentals of Business Enterprise Technologies
<i>Elective (6 credits required in current CIS minor)</i>		<i>Electives (6 credits required in new CIS minor)</i>	
CS 324 (pr 320)	Object-oriented Programming	CIS 360	Systems Analysis, Design & Implementation
CS 361	Design of Information Systems	CIS 389	Special Topics: Launching High Tech Ventures Web-Mobile-Cloud
CS 391	Special Topics: Launching High Tech Ventures	CIS 400 (pr 320)	
CS 423 (pr 320/324)	Database Management Systems	CIS 401	Computers in an Internetworked Society
CS 430 (pr 320)	Business Telecommunications	CIS 412	Business & Enterprise Technologies
CS 450	Health Informatics	CIS 413	Big Data Strategy
CS 465 (pr 320)	Web Application Development (fka Application Software Development)	CIS 417	IT Project Management
CS 493	Special Topics: Fundamentals of IT Project Mgmt	CIS 423 (pr 320/324)	Database Management Systems
CS 494	Web Application Technologies	CIS 430 (pr 320)	Business Networks (formerly Telecommunications)
CS 497	Special Topics: Legal Informatics	CIS 450	Health Informatics
CS 523 (pr 320 & 423)	Big Data Development (fka Advanced Database Management Systems)	CIS 465 (pr 320)	Web Application Development (fka Application Software Development)
CS 524 (pr 324)	Mobile Apps Devt (Design of Information Systems)	CIS 497	Special Topics: Legal Informatics
CS 535 (pr 320 & 430)	Information Security (Computer Comm. Security)	CIS 523 (pr 320 & 423)	Big Data Development (fka Advanced Database Management Systems)
CS 565 (pr 320 or 324)	Mobile to Cloud: Developing Distributed Applications (Applied Software Project Devt)	CIS 524 (pr 324)	Mobile Apps Development (Design of Information Systems)
CS 390-399, 490-498	Selected Topics in CIS	CIS 535 (pr 320 & 430)	Information Security (Computer Comm. Security)
CS 499	CIS Directed Study	CIS 565 (pr 320 or 324)	Mobile to Cloud: Developing Distributed Applications (Applied Software Project Devt)
CS 550	CIS Internship	CIS 390-399, 490-498	Selected Topics in CIS
		CIS 499	CIS Directed Study
		CIS 550	CIS Internship
Total: 12 credit hours		Total: 12 credit hours	

TABLE 3

KEY:	existing required course
	existing elective
	existing elective needing new title & description
	new course

UNIVERSITY OF MIAMI

**SCHOOL of BUSINESS  
ADMINISTRATION**

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Coral Gables, FL 33124

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**MEMORANDUM**

TO: Thomas Salerno  
Chair, Faculty Senate

FROM: Eugene Anderson  
Dean

A handwritten signature in blue ink that appears to read "Eugene Anderson".

SUBJECT: Revision of curriculum for undergraduate BBA/BSBA majors and the minor in CIS

DATE: January 30, 2015

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This memorandum is intended to memorialize my support for the establishment of a revised curriculum for undergraduate BBA/BSBA majors and the minor in CIS in the School of Business. This proposal has broad support from the faculty of the School.

The new curriculum was unanimously approved (8-0) by the School of Business's School Council on April 25, 2014. The proposal was then approved by the full SBA faculty at its regularly scheduled meeting on November 21, 2014.

I enthusiastically support the curricular changes in this proposal and look forward to continue to work with the Faculty Senate regarding this and other initiatives.

EWA:

UNIVERSITY OF MIAMI

**SCHOOL of BUSINESS  
ADMINISTRATION**Office of the Dean  
P.O. Box 248027  
Coral Gables, FL 33124Phone: 305-284-4643  
Fax: 305-284-6526**MEMORANDUM**

TO: Thomas Salerno  
Chair, Faculty Senate

FROM: Eugene Anderson Dean

SUBJECT: Name change of Computer Information Systems Department to Business Technology Department

DATE: January 30, 2015

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This memorandum is intended to memorialize my support for the Change of name of Computer Information Systems Department in the School of Business (and undergraduate Computer Information Systems major and minor) to Business Technology.

This proposal has broad support from the faculty of the School. The new name was unanimously approved (8-0) by the School of Business's School Council on April 25, 2014. The proposal was then approved by the full SBA faculty at its regularly scheduled meeting on November 21, 2014.

I enthusiastically support the approval of this name change and look forward to continue to work with the Faculty Senate regarding this and other initiatives.

EWA:

# Memorandum

**To:** Faculty Senate

**CC:** Dean Gene Anderson, Vice Dean Ann Olazabal

**From:** Yongtao Guan, Professor  
Chair, Computer Info. Systems and Management Science Departments

**Date:** April 23, 2014

**Re:** CIS Department Name Change, Change in name of Major and Minor

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The CIS Faculty met twice in spring 2014 to discuss, and thereafter voted unanimously in favor of, a change to the name of the Department (as well as the major and minor) from Computer Information Systems to Business Technology.

The existing name no longer reflects the role, statute, and scope of technology in the business enterprise. The department was established at a time when computers were still used for computation at the transactional level; data-centric systems were viewed as corporate cost centers rather than value centers; and, the term Chief Information Officer was not yet in use to describe the lead officer in the technology area. Today businesses can no longer function without technology; their strategies and competitive strengths are more than ever dictated by their use of technology and its manipulation on many fronts.

The name Computer Information Systems has little relevance to students or the marketplace. In fact it has a negative, dated connotation with firms, students, and entrepreneurs. The new name – Business Technology – is business-centric, it captures important executive issues such as governance, CIO performance, technology-strategy, as well as basic topics like programming, app development, informatics, and advanced topics such as cloud development, big data software architectures, mobile app development, and system infrastructures. Moreover, the new name provides substantial differentiation from the Computer Science Department in the College of Arts & Sciences, eliminating any existing perceptual overlap. This proposal is supported by the CSC department (memorandum submitted separately).

The CIS faculty believe the proposed new name for the Department (as well as the Major and Minor) will capture the imagination of students, industry, and alumni, placing the newly titled department and its refreshed coursework (see separate proposal) at the center of that important ecosystem. The attached proposal provides more detail regarding names in use at other institutions.



## **Office of Planning, Institutional Research, and Assessment**

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1320 S. Dixie Hwy., Coral Gables, FL 33146  
Fax: 305-284-4081 • [pkg@miami.edu](mailto:pkg@miami.edu)

**MEMORANDUM**

**DATE:** February 20, 2015

**TO:** Ann M. Olazabal  
Vice Dean for Undergraduate Business Education  
School of Business Administration

**FROM:** David E. Wiles, Executive Director  
Assessment and Accreditation

**SUBJECT:** CIS Undergraduate Curriculum Revision to Major and Minor for BBA and BSBA Degree Program (Updated)

On February 2, 2015, the School of Business Administration submitted a proposal notifying our office of its intent to restructure its Computer Information Systems curriculum. Further clarification was sought and obtained as to the scope of the changes. This memorandum is provided in response to that information.

The department and its corresponding major and minor programs would be renamed Business Technology. As part of the CIS curriculum revision, the following four courses are to be created; however, all appear in the 2014-15 *Bulletin* with a notation that the curriculum is subject to approval by the Faculty Senate:

- CIS 400 – Web-Mobile-Cloud
  - CIS 401 – Computers in an Inter-networked Society
  - CIS 412 – Foundations of Business Enterprise Technologies
  - CIS 413 – Big Data Strategy

CIS 410 – Information Systems and Technology, would be eliminated from the business core curriculum and would be replaced by an existing course, CIS 210 – Fundamentals of Business Technology and Innovation. In addition, the following courses are to be renamed or realigned as noted below:

- CIS 430 – Business Telecommunications (to be renamed “Business Networks”)
  - CIS 465 – Applied Software Project Development (to be renamed “Web Application Development”)
  - CIS 493 – Special Topics (renumbered CIS 417 and renamed “Fundamentals of IT Project Management” in 2014-15 *Bulletin*)
  - CIS 498 – Special Topics (renumbered CIS 389 and renamed “Launching High Tech Ventures” in 2014-15 *Bulletin*)

Ann M. Olazabal  
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- CIS 523 – Advanced Database Management Systems (to be renamed “Big Data Development”)
- CIS 524 – Design of Information Systems (to be renamed “Mobile Apps Development”)
- CIS 535 – Computer Communication Security (to be renamed “Information Security”)
- CIS 565 – Applied Software Project Development (to be renamed “Mobile to Cloud: Developing Distributed Applications”)

The curriculum changes and course additions involved in the program restructuring will not require the hiring of additional faculty or infrastructure resources. Although a letter of notification will be submitted, the changes are not considered substantive and will not require formal approval from the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) in order to proceed with their implementation.

The renaming of the major and minor from Computer Information Systems to Business Technology can be handled in the same notification letter to SACSCOC.

Please feel free to contact our office should you have any questions or need additional guidance (305) 284-9431.

cc: Faculty Senate  
Dr. William Green, Sr. Vice Provost and Dean of Undergraduate Education  
Dr. Eugene Anderson, Dean, School of Business Administration



UNIVERSITY  
OF MIAMI

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MEMORANDUM

**DATE:** February 10, 2015

**TO:** Ann M. Olazabal  
Vice Dean for Undergraduate Business Education  
School of Business Administration

**FROM:** David E. Wiles, Executive Director  
Assessment and Accreditation

**SUBJECT:** Computer Information Systems (CIS) Department Name Change to Business Technology (BTE)

On February 2, 2015, the School of Business Administration submitted a proposal notifying our office of its intent to rename and restructure its Department of Computer Information Systems, as well as the corresponding major and minor programs, to Business Technology (BTE). The proposed change is scheduled to take place in fall 2015. Although we are required to report the accompanying curriculum changes and additions, notification regarding departmental name changes and structure is not required by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Please feel free to contact our office should you have any further questions (305) 284-9431.

cc: Faculty Senate  
Dr. William Green, Sr. Vice Provost and Dean of Undergraduate Education  
Dr. Eugene Anderson, Dean, School of Business Administration