Operations and Business Analytics

Sergio Koreisha, Department Head
Undergraduate Advising Office
203 Peterson Hall

The undergraduate curriculum in the Department of Operations and Business Analytics is designed for students who want to prepare for a career in applied statistics, operations management, management information systems, or a management career with a strong emphasis in these areas.

The Department of Operations and Business Analytics offers an undergraduate concentration in information systems and operations management. These courses introduce the major concepts and techniques of analytic decision-making, information technology, supply-chain operations, and e-business. To support these topics, the department also offers courses in statistics.

Faculty

Cathy E. Barnes, instructor. BA, 1981, Minnesota, Minneapolis; MS, 1983, Washington (Seattle). (1990)

James C. Bean, professor (operations research). BS, 1977, Harvey Mudd; MS, 1979, PhD, 1980, Stanford. (2004)

Eren Cil, assistant professor (service operations, applied game theory, queuing theory and supply-chain management). BS, 2006, Middle Eastern Technical; MS, 2006, Koc; PhD, 2010, Northwestern. (2010)

Yue Fang, associate professor (financial econometrics, forecasting, time series analysis). BA, 1984, MA, 1987, Tsinghua; MS, 1994, PhD, 1996, Massachusetts Institute of Technology. (1996)

Xing Hu, assistant professor (revenue management, supply-chain management, operations and marketing interface). BS, 2006, Peking; MPhil, 2008, PhD, 2012, New York University. (2011)

Sergio Koreisha, professor (forecasting, time series analysis, econometric modeling). BS, 1974, MEngr, 1975, California, Berkeley; DBA, 1980, Harvard. (1980)

Nagesh N. Murthy, Roger Engemann Professor in Business Administration; associate professor (supply-chain management, revenue management, new product development). BE, 1982, MMS, 1983, Birla Institute of Technology; MS, 1988, MA, 1994, PhD, 1997, Ohio State. (2003)

Michael Pangburn, associate professor (supply chains, information management, operations management). BS, 1990, Virginia Polytechnic Institute and State University; MS, 1993, PhD, 1997, Rochester. (2002)

Craig Rolling, assistant professor (statistical analysis, model selection). BS, 1998, PhD, 2014, Minnesota, Twin Cities. (2014)

Zhixi Wan, associate professor (supply-chain management, sourcing and procurement strategies, behavioral operations). BS, 2003, Tsinghua; PhD, 2009, Michigan. (2014)

Wenbo Wu, assistant professor (statistical analysis, business analytics). BS, 2007, Texas, Austin; MS, 2010, Central Florida; PhD, 2015, Georgia. (2015)

Zhibin Yang, associate professor (operations management, supply-chain risk management, supply contract design). BS, 1994, Southwest Jiaotong; MS, 2002, Arizona State; PhD, 2009, Michigan, Ann Arbor. (2009)

Fang Yin, instructor (electronic commerce, recommender systems, business value of IT). BA, 1992, Peking; PhD, 2002, Texas, Austin. (2008)

Yongli Zhang, assistant professor (data mining, high-dimensional data, model selection). BS, 1996, Science and Technology of China; MS, 2003, Ohio State; PhD, 2007, Minnesota, Twin Cities. (2010)

Emeriti

James E. Reinmuth, professor emeritus. BA, 1963, Washington (Seattle); MS, 1965, PhD, 1969, Oregon State. (1967)

Larry E. Richards, associate professor emeritus. BA, 1962, MBA, 1963, Washington (Seattle); PhD, 1969, California, Los Angeles. (1966)

The date in parentheses at the end of each entry is the first year on the University of Oregon faculty.

- **Bachelor of Arts: Business Administration**
- **Bachelor of Science: Business Administration**
- **Minor in Business Administration**

Undergraduate Programs

Academic Requirements

To earn an undergraduate degree in the Lundquist College of Business, a student must be an admitted major in good academic standing with the college and the university. Two sets of requirements must be completed: general university requirements and college requirements.

The college is firmly committed to an undergraduate degree program in business based on a solid foundation in the arts and sciences. Students may not earn two majors in the Lundquist College of Business; in other words, a student who has an undergraduate degree in business administration cannot earn another undergraduate degree from the college. See the **Bachelor's Degree Requirements** section of this catalog for specific requirements for bachelor's degrees and for general-education and university requirements.

Students must satisfy the upper-division business core and major requirements in effect when they are admitted as majors.

For a more detailed explanation of requirements for majors, students should pick up the undergraduate degree programs handout in the Advising Office.

Business Premajor Admission

New students planning to earn a bachelor's degree in the Lundquist College of Business enter the university as business premajors. Transfer students and university students from other majors may become business premajors by submitting a Request for Addition or Deletion Major form, available in the Advising Office. Students who seek premajor status in business should meet with an advisor in the college if their GPA is below 3.00. Business premajors typically are not eligible to take most

300- and 400-level business courses. Business premajor status does not guarantee admission to the accounting or business administration major.

Business premajors typically spend the first two years fulfilling general education and premajor requirements.

Premajor Requirements

Junior Standing

Course work of 90 or more credits must be complete.

GPA Requirement

A 3.00 cumulative grade point average in all college course work including transfer work must be earned. The college includes all course work when calculating the cumulative GPA for admission to the major

English Competence

International students must have a Test of English as a Foreign Language (TOEFL) score of at least 575 (paper-based test), 233 (computer-based test), 89 (Internet-based test), an International English Language Testing System (IELTS) score of 7.0, or have completed the Academic English for International Students (AEIS) program.

Holistic Review

Students who have taken all required business premajor course work but fall slightly below the minimum GPA requirements may be considered for admission under a holistic review process. For more details, interested students may visit an academic advisor in 203 Peterson Hall.

Business Premajor Courses

Code	Title	Credits
Core Courses [1]		
BA 101	Introduction to Business	4
ACTG 211	Introduction to Accounting I	4
ACTG 213	Introduction to Accounting II	4
EC 201	Introduction to Economic Analysis: Microeconomics	4
EC 202	Introduction to Economic Analysis: Macroeconomics	4
Additional Courses [2]		
Select one of the following:		8
WR 121 & WR 122	College Composition I and College Composition II	
WR 121 & WR 123	College Composition I and College Composition III	
BA 240	Managing Business Information	4
MATH 241	Calculus for Business and Social Science I	4
MATH 242	Calculus for Business and Social Science II	4
MATH 243	Introduction to Methods of Probability and Statistics	4
Total Credits		**44**

1. A 3.00 GPA and a minimum grade of C– in core courses are required for admission to the major. Premajor requirements must be taken for letter grades. If a graded course is repeated, both course grades are counted in computing the cumulative GPA, but only the second grade is used in calculating the core GPA. Core courses may be repeated only once.
2. Must be taken for letter grades and passed with grades of C– or better.

Application to the Major

Students must submit a formal application for admission to the major. Students apply for major status one term before they plan to take upper-division business courses.

Applications are due the first week of the term for admission the following term. To be eligible for admission as a major, a student must apply before the term deadline. Applications are not accepted during summer session. Application forms are available on the college website. Students who are completing their final term of business premajor requirements may submit applications.

Bachelor of Arts Degree Requirements

Upper-Division Core

Code	Title	Credits
FIN 311	Economic Foundations of Competitive Analysis	4
MKTG 311	Marketing Management	4
FIN 316	Financial Management	4
MGMT 321	Managing Organizations	4
BE 325	Global, Legal, Social Environment of Business	4
OBA 330	Business Statistics	4
OBA 335	Operations Management	4
OBA 340	Business Information Systems	4
BA 352	Leadership and Communication	4
BA 453	Business Strategy and Planning	4
Total Credits		**40**

Upper-division core courses typically are completed during junior year.

Business Administration Requirements

Code	Title	Credits
Seven business courses from at least three business departments [1]		
General-education requirements		54
Nonbusiness breadth requirement courses [2]		24
Global context courses [3]		12
Total Credits		**90**

1. Four of the courses may be taken in one concentration area. Concentrations are optional and do not appear on UO academic transcripts or diplomas.
2. Courses should be an interrelated and coherent set consistent with the student's career goals. A nonbusiness minor meets this requirement, as does two years of language study. Nonbusiness breadth plans must be approved and on file in the Advising Office; assistance in planning individualized programs is available in the advising office.

[3] Courses focus on international, cultural, historical, political, economic, or social issues of a geographic region and the culture of one country or region other than the student's native country. Language courses beyond the first year satisfy this requirement. Global context plans must be approved by an advisor in the Advising Office.

Concentration: Operations and Business Analytics

Code	Title	Credits
Select four of the following:		16
OBA 433	Information Analysis for Managerial Decisions	4
OBA 444	Business Database Management Systems	4
OBA 466	Project and Operations Management Models	4
OBA 477	Supply-Chain Operations and Information	4
OBA 488	E-Business	4
Total Credits		**36**

The 400-level courses are typically taken in the senior year.

Bachelor of Science Degree Requirements

Upper-Division Core

Code	Title	Credits
FIN 311	Economic Foundations of Competitive Analysis	4
MKTG 311	Marketing Management	4
FIN 316	Financial Management	4
MGMT 321	Managing Organizations	4
BE 325	Global, Legal, Social Environment of Business	4
OBA 330	Business Statistics	4
OBA 335	Operations Management	4
OBA 340	Business Information Systems	4
BA 352	Leadership and Communication	4
BA 453	Business Strategy and Planning	4
Total Credits		**40**

Upper-division core courses typically are completed during junior year.

Business Administration Requirements

Code	Title	Credits
Seven business courses from at least three business departments [1]		
General-education requirements		54
Nonbusiness breadth requirement courses [2]		24
Global context courses [3]		12
Total Credits		**90**

[1] Four of the courses may be taken in one concentration area. Concentrations are optional and do not appear on UO academic transcripts or diplomas.

[2] Courses should be an interrelated and coherent set consistent with the student's career goals. A nonbusiness minor meets this requirement, as does two years of language study. Nonbusiness breadth plans must be approved and on file in the Advising Office; assistance in planning individualized programs is available in the advising office.

[3] Courses focus on international, cultural, historical, political, economic, or social issues of a geographic region and the culture of one country or region other than the student's native country. Language courses beyond the first year satisfy this requirement. Global context plans must be approved by an advisor in the Advising Office.

Concentration: Operations and Business Analytics

Code	Title	Credits
Select four of the following:		16
OBA 433	Information Analysis for Managerial Decisions	4
OBA 444	Business Database Management Systems	4
OBA 466	Project and Operations Management Models	4
OBA 477	Supply-Chain Operations and Information	4
OBA 488	E-Business	4
Total Credits		**36**

The 400-level courses are typically taken in the senior year.

Definitions, Limitations, and Policies

Transfer Students

The sequential nature of this program requires careful academic planning. Students who want to transfer to the college are encouraged to meet with an advisor in the Lundquist College of Business early in their academic careers. Students are admitted to the university as business premajors. Once admitted, they may apply for major status in accordance with the procedure described. Applications are due the first Friday of the term for admission the following term.

Second Bachelor's Degree

A student who has a bachelor's or master's degree in a field of business administration may not earn a second bachelor's degree in business. Students who have earned a nonbusiness degree and want a second degree in a field of business must be admitted to the university as postbaccalaureate nongraduate students. Second-degree candidates must meet the same admission requirements and follow the same application process described.

Students retain business premajor status until admission requirements are completed or waived because of completed course work. Second-degree students must complete the same upper-division requirements as first-degree candidates. The Second Bachelor's Degree section of this catalog, under **Bachelor's Degree Requirements**, lists university requirements for a second bachelor's degree; the Undergraduate Advising office has information about Lundquist College requirements.

Residence Requirement

Students must complete a minimum of 44 upper-division credits in regularly scheduled Lundquist College of Business courses. With the department head's approval, credits may be transferred from other

accredited institutions, independent study, or approved courses in other departments.

Grading

Premajor required courses and upper-division courses must be taken for letter grades and passed with grades of C– or better. See the **Registration and Academic Policies** section of this catalog for an explanation of the university's grading systems.

Upper-Division Courses

Courses for the minor are open to nonmajors, and courses for the certificate in international business communication are open to students whose native language is not English. Only admitted majors in the Lundquist College of Business may enroll in all other 300- and 400-level business courses.

Continuous Progress

Students who do not attend the university for an extended period of time after being admitted as a major may be required to reapply for admission and fulfill current major requirements if the *UO Catalog* for the last year of attendance has expired. See Catalog Expiration and Requirements Policies in the **Reader's Guide to the Catalog** (http://catalog.uoregon.edu/readersguide)**.**

Business Administration Minor

All professions and organizations, public and private, operate according to business principles. Earning a minor in business administration prepares students to participate in organizational conversations and become leaders within their future professions. The minor in business administration is open to students from all majors other than business administration and accounting. Completing the minor requires 24 credits of course work, which can be completed in one academic year.

Students can declare a minor in business administration online at the college's website, where a checklist of requirements can be found. Advising assistance is available in the Undergraduate Advising office.

Twelve upper-division credits must be taken in the Lundquist College of Business. Upper-division business courses must be taken for letter grades. Students must earn a C– or better in all courses taken for a letter grade to fulfill minor requirements. When minor requirements have been completed and notification of application for a degree has been received from the Office of the Registrar, the student is cleared for the minor.

Code	Title	Credits
Lower Division		
BA 101	Introduction to Business	4
ACTG 211	Introduction to Accounting I	4
or BA 215	Accounting: Language of Business Decisions	
Upper Division		
BA 315	Economy, Industry, and Competitive Analysis	4
BA 316	Management: Creating Value through People	4
BA 317	Marketing: Creating Value for Customers	4
BA 318	Finance: Creating Value through Capital	4
Total Credits		**24**

- **Master of Business Administration**
- **Master of Arts**
- **Master of Science**
- **Doctor of Philosophy**

Graduate Programs

Master of Business Administration

302 Peterson Hall
Lillis Business Complex
541-346-3306
541-346-0073 fax

The Lundquist College of Business MBA degree embodies the college's emphasis on interdisciplinary study, experiential learning, research excellence, and a supportive learning environment.

True to this interdisciplinary focus, the MBA curriculum consists of four tracks: innovation and entrepreneurship, finance and securities analysis, sports business, and sustainable business practices. Building on a common core of foundational courses in accounting, decision sciences, finance, management, and marketing, students must choose one of these curricular tracks when applying to the program.

The four tracks of the MBA curriculum are aligned with the college's centers—the Lundquist Center for Entrepreneurship, the Finance and Securities Analysis Center, the Center for Sustainable Business Practices, and the James H. Warsaw Sports Marketing Center. The centers not only promote research collaboration among faculty members from different departments, but they also facilitate student interactions with industry professionals and provide practical, real-world learning opportunities. These include internships, business planning ventures, competitions, and one- or two-term consulting projects in the second year. In addition, the Leadership and Communication Center works with students on professional skills assessment, leadership, and team dynamics as well as presentation and other communication skills, beginning with an extended orientation.

Strong faculty involvement and the state-of-the art facilities of the Lillis Business Complex create an ideal learning environment. An emphasis on group work ensures that students get to know one another and their instructors well. In addition, a strong cohort model aids in developing solid working relationships and strong friendships. Finally, students may choose to enhance their international education by studying abroad in the summer on the Engaging Asia tour.

Virtually all MBA students come to the university with work experience; the average is four years. About one-third are women; two thirds hold a nonbusiness bachelor's degree; and one-fifth are international students. The program draws students from across the United States and 12 to 15 countries.

Two years of full-time study are needed to earn the minimum of 76 credits required for the degree. See **Accelerated Program** for information about the nine- or 11-month accelerated program. See **Administration of the Master's Degree Programs** for admission requirements.

Accelerated Program

The accelerated master's degree program is intensive, allowing outstanding undergraduate business majors from an institution accredited by the Association to Advance Collegiate Schools of Business (AACSB International) to earn an MBA degree in nine or 11 months (three or four terms) by taking 15 courses (a minimum of 45 credits) in three or four terms. Applicants should have full-time work experience. Students must

choose one of the four tracks listed above. Admission is accepted for fall, winter, or spring terms.

Oregon Executive MBA

David Boush, Executive Director
200 SW Market St., Suite L101
Portland, Oregon 97201
503-276-3622
866-996-3622 toll free
503-276-3626 fax
oemba.uoregon.edu
oemba@uoregon.edu (oemba@oemba.uoregon.edu)

The University of Oregon offers the two-year Oregon Executive Master of Business Administration (OEMBA) Program for employed mid- to senior-level executives. Classes are held in Portland every other week. In addition to meeting standard admission criteria, applicants to this program must have substantial managerial experience and corporate sponsorship. Courses are open only to students who apply and are admitted to this program.

Master of Science or Master of Arts

The primary master's degree offered by the Lundquist College of Business is the MBA. The MS and MA degrees are awarded exclusively to students who are enrolled in a PhD program. The MA degree requires competence in a second language. The program leading to the MS or MA degree (in disciplines other than accounting) allows more specialization than the MBA program and may be adapted to a student's particular needs. The requirements are as follows:

1. Completion of the AACSB International core areas as specified by the department in the Graduate School of Management in which the majority of specialization takes place. For students without academic preparation in business, completion of the common body of business knowledge usually amounts to satisfying the MBA core courses. The manner in which this requirement is satisfied is determined by the student in consultation with his or her program committee and subject to approval
2. Completion of a minimum of 45 graduate credits beyond the MBA core courses. These should include the following:
   a. A minimum of 18 credits of course work in the primary area of specialization. A majority of this work should be taken in the college. However, specialization is defined by a subject of study and is not limited to courses offered by one department or by the Graduate School of Management
   b. A minimum of 12 credits of course work in a secondary area of study either in the Graduate School of Management or in a related field
   c. A maximum of 15 credits in electives. A maximum of 9 credits of Thesis (503) can be taken at the option of the student and the program committee. For students choosing to complete a thesis, the number of credits taken for the thesis is deducted from the required number of elective credits
   d. A minimum of 27 graduate credits taken in the Graduate School of Management
3. Approval of the proposed program of study by a program committee of at least two faculty members. At least one faculty member must be from the department in which the majority of specialization courses are taken:
   a. The composition of the program committee must be approved by the director of doctoral programs
   b. An approved program of study must be submitted before any courses beyond the common body of business knowledge can be taken
4. If a thesis is undertaken, approval is required by a thesis committee of at least two faculty members. At least one faculty member must be from the department in which the majority of specialization courses is taken
   a. The composition of the thesis committee must be approved by the director of doctoral programs. The thesis committee may have different members than the program committee
   b. A thesis proposal must be approved in writing by all members of the thesis committee and submitted to the assistant dean for graduate programs before substantial work is undertaken on the thesis
   c. In case of disagreement between thesis committee members over the acceptability of the thesis, the issue is resolved by an ad hoc committee of at least three faculty members appointed by the head of the department in which the majority of specialization courses has been taken
5. Computer competence. Details of this requirement appear under **Undergraduate Programs**

Doctoral Programs

The emphasis of the PhD in operations and business analytics is on supply-chain coordination and risk management, operations-marketing interface and retail operations, sustainable operations and supply-chain management, service operations, strategic pricing, and revenue management.

The student's program must satisfy the requirements of the Graduate School and the following requirements of the Lundquist College of Business.

The doctoral program typically requires four years of postmaster's degree work while in residence on the Eugene campus.

PhD Degree Requirements

Core Courses [1]	
Three econometrics and advanced statistics-probability courses	
Four optimization method courses	
Three foundations of economic analysis courses	
Two advanced mathematical tool courses	
Supporting Courses	
Four courses from among accounting, finance, marketing, statistics, operations management, microeconomics, and linear algebra [2]	

[1] Students are required to take at least twelve core courses passed with grades of B– or better; none of these courses may be taken pass/no pass. They may be taken outside the Lundquist College subject to the approval of the faculty advisor. At least eight courses must be completed at the UO after admission to the doctoral program.

[2] Courses must be passed with a grade of mid-B or better. At least two courses must be completed at the UO after admission to the doctoral program.

Advancement to Candidacy

Students are advanced to candidacy for the PhD degree after satisfying the preceding requirements and upon recommendation by their advisory committee to the Lundquist College of Business and to the Graduate School. Advancement must occur no later than three years after the student's entry into the doctoral program.

Examinations

Students must pass one written comprehensive examination in their primary area. Examinations are graded high pass, pass, or no pass. For examinations given in separate and predesignated parts, the grade may apply to each subpart. All grades are outright; a conditional pass is not permitted.

In the event of failure, a student may be allowed to retake a comprehensive examination or predesignated subpart one time, at the discretion of the department in which the student is majoring. Typically, the examination or predesignated subpart should be retaken during the term following the initial attempt, but it may be taken no sooner than two months after the initial attempt. Failure to pass the comprehensive examination or a subpart on the second attempt results in automatic termination from the PhD program.

Dissertation

The student must complete a dissertation embodying the results of research and showing evidence of originality and ability in independent investigation. The dissertation must show mastery of the literature and techniques, be written in creditable literary form, and make a contribution to knowledge.

The student is responsible for formation of a dissertation committee, subject to approval by the Lundquist College of Business and the Graduate School of the university. This committee includes at least three regular faculty members of the college and at least one member from outside the college. The chair of the committee serves as the student's primary dissertation advisor. Before the dissertation topic is accepted by the dissertation committee, the student makes a public oral presentation and defense of the research proposal and design. When the topic is accepted by the committee, a copy of the proposal, signed as approved by the committee, is placed in the candidate's file.

The dissertation must be completed within four years of the student's advancement to candidacy. Upon petition to and approval by the PhD program committee and the Graduate School, this period may be extended for one year. Failure to complete the dissertation within this time period invalidates the student's comprehensive examinations and advancement to candidacy. The student must successfully defend the completed dissertation in a public oral examination and defense before the dissertation committee.

Grade Point Average (GPA)

The student must maintain a cumulative GPA of 3.00 or higher in graduate courses.

Termination from Program

A student's participation in the PhD program may be terminated under one or more of the following conditions:

- failure to make satisfactory progress toward advancement to candidacy
- a GPA below 3.00 for two consecutive terms
- failure to complete a dissertation within four years after advancement to candidacy

The decision to terminate will be made by the director of the PhD program after consultation with the PhD coordinator and faculty members of the department in which the student is majoring.

A student dropped from the program is notified in writing, with reasons for termination clearly explained, and a copy of the letter is placed in the student's file. The student has the right to appeal the termination decision by submitting a petition to the senior associate dean for academic affairs.

Waivers

Waiver of any of the above requirements is permitted only in exceptional instances and with the approval of the candidate's program committee, the PhD program committee, and the director of PhD programs. Under no circumstances can requirements of the Graduate School be waived by the Lundquist College of Business.

- **International Business Communication letter of mastery**
- **Certificate in Global Management**

International Business Communication

International students may earn a letter certifying mastery in international business communication. This program, directed by Ron Severson, is open to all undergraduate international students of any major; the two cross-cultural courses are open to domestic students as well.

Code	Title	Credits
BA 361	Cross-Cultural Business Communication	4
BA 362	Effective Business Writing	4
BA 363	Effective Business Presentations	4
BA 364	International Business Research	4
BA 365	Cross-Cultural Negotiation	4
Total Credits		**20**

Certificate in Global Management

Lundquist College of Business students may earn a certificate in global management. Study abroad is highly recommended. Additional information is available in the Advising Office.

Code	Title	Credits
FIN 463	International Finance	4
MGMT 420	Managing in a Global Economy	4
MKTG 470	International Marketing	4
Approved nonbusiness courses relating to an international theme		24
Two years college-level language study		
Total Credits		**36**

Courses

OBA 199. Special Studies: [Topic]. 5 Credits.
Repeatable.

OBA 330. Business Statistics. 4 Credits.
Computer-aided business applications of hypothesis testing, simple linear regression. Introduction to multiple regression andnonparametric techniques. Blocked and completely randomized one- and two-factor experimental designs. Students cannot receivecredit for both OBA 330 and OBA 330H.

OBA 330H. Business Statistics. 4 Credits.
Review of hypothesis testing and confidence intervals. Regression analysis: computer-aided model formulation and diagnostic testing. Making decisions under uncertainty. Students cannot receive credit for both OBA 330 and OBA 330H.
Prereq: open only to students in the LCB honors program.

OBA 335. Operations Management. 4 Credits.
Concepts and applications of operations management. Use of information technology in operations. Topics include forecasting, quality, supply chain management, information systems in operations management, and planning and scheduling. Students cannot receive credit for both OBA 335 and OBA 335H.
Pre- or coreq: OBA 330.

OBA 335H. Operations Management. 4 Credits.
Planning and control of manufacturing and service operations with an emphasis on supply chain management. Students cannot receivecredit for both OBA 335 and OBA 335H.
Pre/coreq: OBA 330 or OBA 330H. Open only to students in the LCB honors program.

OBA 340. Business Information Systems. 4 Credits.
Explores standard protocols for describing and modeling business information and processes; techniques for designing management information systems; criteria for analyzing firms' implementations of information technology. Students cannot receive credit for both OBA 340 and OBA 340H.

OBA 340H. Business Information Systems. 4 Credits.
Explores standard protocols for describing and modeling business information and processes; techniques for designing management information systems; criteria for analyzing firms' implementations of information technology. Students may not receive credit for both OBA 340 and OBA 340H.
Prereq: open only to students in the LCB honors program.

OBA 401. Research: [Topic]. 1-21 Credits.
Repeatable.

OBA 403. Thesis. 1-6 Credits.
Repeatable.

OBA 405. Reading and Conference: [Topic]. 1-3 Credits.
Repeatable.

OBA 406. Special Problems: [Topic]. 1-4 Credits.
Repeatable.

OBA 407. Seminar: [Topic]. 1-4 Credits.
Repeatable.

OBA 409. Practicum: [Topic]. 1-6 Credits.
Repeatable.

OBA 410. Experimental Course: [Topic]. 1-4 Credits.
Repeatable. A recent topic is Multivariate Statistical Methods.

OBA 433. Information Analysis for Managerial Decisions. 4 Credits.
Leveraging information to manage risk and improve decisions; data-driven approaches for discovering business trends and strategic opportunities, including techniques for data-mining and analyzing empirical data.
Prereq: OBA 330.

OBA 444. Business Database Management Systems. 4 Credits.
Techniques for structuring and storing business data; primary focus on relational database theory, with applied skills for business users, including data warehouses, reporting, and normalization.
Prereq: OBA 340 or OBA 340H.

OBA 466. Project and Operations Management Models. 4 Credits.
Frameworks and solutions for managing complex projects and operations; implementing optimal strategies for producing profitable new products and services in the competitive global business environment.
Prereq: OBA 335 or 335H.

OBA 477. Supply-Chain Operations and Information. 4 Credits.
Strategic and tactical issues pertaining to the distribution and delivery of products and services. Methodologies and systems for designing, tracking, and managing complex global operations.
Prereq: OBA 335 or 335H.

OBA 488. E-Business. 4 Credits.
Fundamental principles of electronic business; effect of e-business on business strategies, processes, customers, and suppliers; assessing the impact of e-business technologies on firm performance.
Prereq: OBA 340 or 340H or CIT 382.

OBA 503. Thesis. 1-16 Credits.
Repeatable.

OBA 510. Experimental Course: [Topic]. 1-4 Credits.
Repeatable. A recent topic is Multivariate Statistical Methods.

OBA 533. Information Analysis for Managerial Decisions. 4 Credits.
Leveraging information to manage risk and improve decisions; data-driven approaches for discovering business trends and strategic opportunities, including techniques for data-mining and analyzing empirical data.
Prereq: all MBA core courses.

OBA 544. Business Database Management Systems. 4 Credits.
Techniques for structuring and storing business data; primary focus on relational database theory, with applied skills for business users, including data warehouses, reporting, and normalization.
Prereq: all MBA core courses.

OBA 566. Project and Operations Management Models. 4 Credits.
Frameworks and solutions for managing complex projects and operations; implementing optimal strategies for producing profitable new products and services in the competitive global business environment.
Prereq: all MBA core courses.

OBA 577. Supply-Chain Operations and Information. 4 Credits.
Strategic and tactical issues pertaining to the distribution and delivery of products and services. Methodologies and systems for designing, tracking, and managing complex global operations.
Prereq: all MBA core courses.

OBA 588. E-Business. 4 Credits.
Fundamental principles of electronic business; effect of e-business on business strategies, processes, customers, and suppliers; assessing the impact of e-business technologies on firm performance.
Prereq: all MBA core courses.

OBA 601. Research: [Topic]. 1-16 Credits.
Repeatable.

OBA 603. Dissertation. 1-16 Credits.
Repeatable.

OBA 605. Reading and Conference: [Topic]. 1-3 Credits.
Repeatable.

OBA 607. Seminar: [Topic]. 1-3 Credits.
Repeatable.

OBA 608. Special Topics: [Topic]. 1-12 Credits.
Repeatable.

OBA 609. Practicum: [Topic]. 1-16 Credits.
Repeatable.

OBA 610. Experimental Course: [Topic]. 1-5 Credits.
Repeatable.

OBA 612. Quantitative Methods for Managers. 3 Credits.
Concepts and techniques of analytic decision making, sampling and statistical inference, and regression analysis.

OBA 613. Operations Management. 3 Credits.
Overview of the managerial issues associated with production and delivery of goods and services. Includes the use of quantitative modeling and several case studies in operations.