School of Natural Sciences and Mathematics

Biology and Healthcare Management (Double Major) (BS)

Bachelor of Science in Biology and Healthcare Management (Double Major)

Degree Requirements (149 semester credit hours)\[1, 2\]

NSM Faculty

**Professors:** Lee A. Bulla, Rockford K. Draper, Juan E. González, Lawrence J. Reitzer, Stephen Spiro, Li Zhang, Michael Qiwei Zhang

**Professors Emeritus:** Hans Bremer, Donald M. Gray, Claud S. Rupert

**Associate Professors:** Gail A. M. Breen, John G. Burr, Jeff L. Dejong, Ernest M. Hannig, Tae Hoon Kim, Dennis L. Miller

**Assistant Professors:** Nikki Delk, Heng Du, Jung-whan (Jay) Kim, Kelli Palmer, Duane D. Winkler, Zhenyu Xuan, Hyuntae Yoo

**Research Assistant Professors:** Monique Duncan, Lan Guo

**Senior Lecturers:** Irina Borovkov, Mehmet Candas, Vincent P. Cirillo, Brenna Hill, Wen-Ju Lin, Robert C. Marsh, David Murchison, Jing Pan, Elizabeth Pickett, Ruben D. Ramirez, Scott A. Rippel, Elizabeth L. Rugg, Ilya Sapochnikov, Uma Srikant, Michelle Wilson, Wen-Ho Yu

JSOM Faculty


**Professor Emeritus:** Dale Osborne


**Associate Professors:** Nina Baranchuk, Norris Bruce, Huseyin Cavusoglu, Jianqing Chen, Zhonglan Dai, Xianjun Geng, Umit G. Gurun, J. Richard Harrison, Surya N. Janakiraman, Robert L. Kieschnick Jr., Nanda Kumar, Seung-Hyun Lee, Lívia Markóczy, Syam Menon, Toyah Miller, Alp Muharremoglu, Ramachandran (Ram) Natarajan, Valery Polkovnichenko, Ashutosh Prasad, Orlando C. Richard, Young U. Ryu, Gil Sadka, Jane Salk, David J. Springate, Kelsey D. Wei, Jun Xia, Ying Xie, Yexiao Xu, Alejandro Zentner, Yuan Zhang, Feng Zhao, Zhiqiang (Eric) Zheng, Yibin Zhou

**Clinical Associate Professors:** Sonia Leach, Carolyn Reichert, Kelly Slaughter, Mark Thouin, John McClain Watson

**Assistant Professors:** Mehmet Ayvaci, Emily Choi, Rebecca Files, Bernhard Ganglmair,
I. Core Curriculum Requirements: 42 semester credit hours

Communication: 6 semester credit hours

COMM 1311 Survey of Oral and Technology-based Communication
RHET 1302 Rhetoric

Mathematics: 3 semester credit hours

MATH 2413 Differential Calculus

Life and Physical Sciences: 6 semester credit hours

CHEM 1311 General Chemistry I
CHEM 1312 General Chemistry II

Language, Philosophy and Culture: 3 semester credit hours

Select any 3 semester credit hours from Language, Philosophy and Culture core courses (see advisor)

Creative Arts: 3 semester credit hours

Select any 3 semester credit hours from Creative Arts core courses (see advisor)

American History: 6 semester credit hours

Select any 6 semester credit hours from American History core courses (see advisor)

Government / Political Science: 6 semester credit hours

GOVT 2305 American National Government
GOVT 2306 State and Local Government

Social and Behavioral Sciences: 3 semester credit hours

ECON 2301 Principles of Macroeconomics 4, 7

Component Area Option: 6 semester credit hours

MATH 2414 Integral Calculus 4, 5, 6
ECON 2302 Principles of Microeconomics 4, 7

II. Major Requirements: 92 semester credit hours

Biology Major Preparatory Courses: 20 semester credit hours beyond Core Curriculum

CHEM 1111 General Chemistry Laboratory I
CHEM 1112 General Chemistry Laboratory II
CHEM 1311 General Chemistry I 4
CHEM 1312 General Chemistry II 4
CHEM 2123 Introductory Organic Chemistry Laboratory I 7
CHEM 2125 Introductory Organic Chemistry Laboratory II 7
CHEM 2323 Introductory Organic Chemistry I 7
CHEM 2325 Introductory Organic Chemistry II 7
MATH 2413 Differential Calculus 4, 5, 6
MATH 2414 Integral Calculus 4, 5, 6
PHYS 2325 Mechanics and PHYS 2125 Physics Laboratory I
  or PHYS 1301 College Physics I and PHYS 2125 Physics Laboratory I
PHYS 2326 Electromagnetism and Waves and PHYS 2126 Physics Laboratory II
  or PHYS 1302 College Physics II and PHYS 2126 Physics Laboratory II
NATS 1101 Natural Sciences and Mathematics Freshman Seminar or BA 1100 Business Basics
UNIV 1010 Freshman Seminar

Biology Core Courses: 29 semester credit hours

BIOL 2111 Introduction to Modern Biology Workshop I 7
BIOL 2112 Introduction to Modern Biology Workshop II 7
BIOL 2281 Introductory Biology Laboratory 7
BIOL 2311 Introduction to Modern Biology I 7
BIOL 2312 Introduction to Modern Biology II
BIOL 3101 Classical and Molecular Genetics Workshop
BIOL 3102 Eukaryotic Molecular and Cell Biology Workshop
BIOL 3161 Biochemistry Workshop I
BIOL 3162 Biochemistry Workshop II
BIOL 3301 Classical and Molecular Genetics
BIOL 3302 Eukaryotic Molecular and Cell Biology
BIOL 3361 Biochemistry I
BIOL 3362 Biochemistry II
or BIOL 3335 Microbial Physiology
BIOL 3380 Biochemistry Laboratory

Business Major Preparatory Courses: 16 semester credit hours beyond Core Curriculum

ACCT 2301 Introductory Financial Accounting
ACCT 2302 Introductory Management Accounting
HMGT 3100 Professional Development
BLAW 2301 Business and Public Law
ECON 2301 Principles of Macroeconomics
ECON 2302 Principles of Microeconomics
OPRE 3333 Quantitative Business Analysis
or MATH 2333 Matrices, Vectors, and Their Application
STAT 3360 Probability and Statistics for Management and Economics
or STAT 2332 Introductory Statistics for Life Sciences
or OPRE 3360 Managerial Methods in Decision Making Under Uncertainty

Business Core Courses: 27 semester credit hours

BCOM 3310 Business Communication
BCOM 4350 Advanced Business Communication
FIN 3320 Business Finance
ITSS 3300 Information Technology for Business
OPRE 3310 Operations Management
OBHR 3310 Organizational Behavior
MKT 3300 Principles of Marketing
III. Elective Requirements: 15 semester credit hours

Guided Electives: 15 semester credit hours

Healthcare Management Core Courses: 12 semester credit hours

- **HMGT 3301** Introduction to Healthcare Management
- **HMGT 3311** Healthcare Accounting
- **HMGT 4321** Introduction to Healthcare Information Systems
- **HMGT 3310** Healthcare Regulatory Environment

Biology (3 semester credit hours):

- **BIOL 4380** Cell and Molecular Biology Laboratory or approved upper-division biology course.

Each student is expected to complete a minimum of 160 hours of business-related work to fulfill the JSOM professional practicum requirement.

1. Incoming freshmen must enroll and complete requirements of UNIV 1010 and the corresponding school-related freshman seminar course. Students, including transfer students, who complete their core curriculum at UT Dallas must take UNIV 2020.
2. Degree is 150 semester credit hours if students are required to take BA 1100 or NATS 1101.
3. Curriculum Requirements can be fulfilled by other approved courses from institutions of higher education. The courses listed are recommended as the most efficient way to satisfy both Core Curriculum and Major Requirements at UT Dallas.
4. A required Major course that also fulfills a Core Curriculum requirement. Semester credit hours are counted in Core Curriculum.
5. Six semester credit hours of Calculus are counted under Mathematics Core and Component Area Option Core, and 2 semester credit hours of Calculus are counted as Biology Major Preparatory Courses.
6. Students may substitute MATH 2413 and MATH 2414 by taking MATH 2417 and MATH 2419.
7. Indicates a prerequisite class to be completed before enrolling for upper-division classes.
8. Students may substitute MATH 2418 or CS 2305.

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