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)

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: Zachary Campbell, Nikki Delk, Heng Du, Jung-whan (Jay) Kim, Faruck Morcos, 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 Sapožnikov, Uma Srikanth, Michelle Wilson, Wen-Ho Yu

JSOM Faculty


Professor Emeritus: Dale Osborne

Clinical Professors: John Barden, Britt Berrett, Abhijit Biswas, Pamela Foster Brady, Shawn Carraher, Paul Convery, David Cordell, Tevfik Dalgic, Michael Deegan, Kutsal Dogan, Howard Dover, Greg


**Clinical Associate Professors:** Shawn Alborz, Larry Chasteen, Sonia Leach, Kannan Ramanathan, Carolyn Reichert, Avanti P. Sethi, Kelly Slaughter, James Szot, Mark Thouin, John McClain Watson

**Assistant Professors:** Mehmet Ayvaci, Emily Choi, Bernhard Ganglmair, Dorothée Honhon, Kyle Hyndman, Atanu Lahiri, Sheen Levine, Bin Li, Jun Li, Meng Li, Ningzhong Li, Xiaolin Li, Naim Bugra Ozel, Arzu Ozoguz, Anyan Qi, Alejandro Rivera Mesias, Alessio Saretto, Serdar Simsek, Gonca P. Soysal, Shaojie Tang, Christian Von-Drathen, Malcolm Wardlaw, Han (Victor) Xia, Steven Xiao, Shengqi Ye, Nir Yehuda, Jiaying Zhang, Zhe (James) Zhang, Xiaofei Zhao

**Clinical Assistant Professors:** Athena Alimirzaei, Moran Blueshtein, Ayfer Gurun, Maria Hasenhu ttl, Julie Haworth, Jeffery (Jeff) Hicks, Kristen Lawson, Vance Lewis, Liping Ma, Ravi Narayan, Dawn Owens, Anastasia V. Shcherbakova, Jeanne Sluder, Nassim Sohaee, jdb101000.jpg140630

**Visiting Assistant Professor:** Lale Guler

**Senior Lecturers:** Arthur M. Agulnek, Semiramis Amirpour, Frank Anderson, Anindita Bardhan, Tiffany A. Bortz, Richard Bowen, Monica E. Brussolo, George DeCourcy, Eugene (Gene) Deluke, Alexander Edsel, Amal El-Ashmawi, Carol Flannery, Mary Beth Goodrich, Thomas (Tom) Henderson, Jennifer G. Johnson, Jackie Kimzey, Chris Linsteadt, Michele Lockhart, Joseph Mauriello, Victoria D. McCrady, Edward Meda, Prithi Narasimhan, Madison Pedigo, Matt Polze, James Richards, Debra Richardson, Margaret Smallwood, Steven Solcher, Luell (Lou) Thompson, Amy L. Troutman, Jeremy Vickers, Robert Wright, Kathy Zolton, Hubert Zydorek

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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

Component Area Option: 6 semester credit hours
  MATH 2414 Integral Calculus
  ECON 2302 Principles of Microeconomics

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
  CHEM 1312 General Chemistry II
  CHEM 2123 Introductory Organic Chemistry Laboratory I
  CHEM 2125 Introductory Organic Chemistry Laboratory II
  CHEM 2323 Introductory Organic Chemistry I
  CHEM 2325 Introductory Organic Chemistry II
  MATH 2413 Differential Calculus
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
BIOL 2112 Introduction to Modern Biology Workshop II
BIOL 2281 Introductory Biology Laboratory
BIOL 2311 Introduction to Modern Biology I
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 4, 7
ECON 2302 Principles of Microeconomics 4, 7
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
BPS 4305 Strategic Management
IMS 3310 International Business

III. Elective Requirements: 15 semester credit hours

Guided Electives: 15 semester credit hours

Healthcare Management Core Courses: 12 semester credit hours

HMGТ 3301 Introduction to Healthcare Management
HMGТ 3311 Healthcare Accounting
HMGТ 4321 Introduction to Healthcare Information Systems
HMGТ 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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