HEALTH OUTCOMES AND BIOMEDICAL INFORMATICS DEPARTMENT

Chair: B. Shenkman
Graduate Coordinator/Director: M. Gurka

Students can pursue a Ph.D., a Master of Science degree, or a Graduate Certificate. Through the College of Medicine, the graduate programs offered in these interdisciplinary areas are the Master of Science degree with a major in Medical Sciences and a concentration in Biomedical Informatics or a concentration in Health Outcomes and Implementation Science. Through the college, they also offer both of these combinations for the Doctor of Philosophy degree as well.

There is increasing emphasis on assessing health outcomes throughout the lifespan in a variety of healthcare and community settings. Nationally, the National Institute of Health and other federal and state agencies focus on the development of evidence-based programs to promote health, improve health care delivery, and enhance health outcomes.

Outcomes research generates evidence that informs health care program design in clinical and community settings, the promotion of effective clinical and community interventions, quality of care, cost-effective and clinically appropriate choices for patients in the allocation of healthcare resources (clinical effectiveness), and incorporation of best practice models into health-related programs and policies. Outcomes research also provides mechanisms to understand how to translate research into practice and policy, how to improve the quality and efficiency of health programs, and how to achieve equitable and appropriate delivery of health programs and clinical care, particularly for underserved and vulnerable populations.

Our graduate programs are designed to train professionals in the health care and health research fields about the science that supports the development and evaluation of evidence-based clinical and community-based programs focused on improving health outcomes. Further, our programs emphasize methods for translating research into practice and policy. The unique combination of courses offered through these graduate programs will give trainees the tools needed to examine health outcomes and policies in a variety of settings across different age spans and to examine the individual, social, health system, and health policy factors that influence health outcomes.

In addition to traditional graduate students, both programs are available to medical students, post-doctoral students, fellows, residents, Ph.D. students, and junior faculty.

For more information, please visit https://hobi.med.ufl.edu.

Courses

Health outcomes and biomedical informatics courses

Code	Title	Credits
GMS 5905	Special Topics in Biomedical Sciences	1-4
GMS 6803	Data Science for Clinical Research	3
GMS 6804	Translational Bioinformatics	3
GMS 6805	Information Modeling in Biomedicine	3
GMS 6806	Security and Privacy for Clinical Research	3
GMS 6812	Health Outcomes Research in Cancer	3
GMS 6813	Pragmatic Clinical Trials	3
GMS 6822	Measuring and Analyzing Health Outcomes II	3
GMS 6829	Longitudinal Research Design	2
GMS 6833	Health Outcomes Research in Vulnerable Populations	3
GMS 6836	Foundations of Learning Health Systems Research	1
GMS 6846	Systematic Review and Meta-Analysis in Clinical, Health Services Research and Public Health	2
GMS 6848	Ensuring Rigor and Reproducibility in Clinical and Translational Research	1
GMS 6850	Foundations of Biomedical Informatics	3
GMS 6851	Fundamentals of Dissemination and Implementation Research	3
GMS 6852	Community Engaged Research for Clinical Effectiveness and Implementation Science Studies	2
GMS 6853	Improvement and Implementation Science in the Learning Health System	3
GMS 6856	Introduction to Biomedical Natural Language Processing	3
GMS 6857	Clinical Decision Support Systems	3
GMS 6885	Translational Health Research Design	3
GMS 6889	Systematic Review Methods	3
GMS 6893	Clinical and Translational Science Seminar Series	2
GMS 7858	Causal Artificial Intelligence for Health Research	3
GMS 7866	Principles of Referent Tracking in Biomedical Informatics	3
GMS 7886	Health Outcomes and Policy PhD Seminar: Applied Research	3
GMS 7887	Health Outcomes & Policy PhD Research Seminar	1
GMS 7906	Grant Writing for Health Outcomes Studies	2
STA 5503	Categorical Data Methods	3
STA 5701	Applied Multivariate Methods	3
STA 6166	Statistical Methods in Research I	3
STA 7179	Survival Analysis	3
STA 7249	Generalized Linear Models	3
STA 7346	Statistical Inference	3
STA 7347	Advanced Inference	3

Faculty

Professor

- Bian, Jiang
- Bylund-Lincoln, Carma
- Gurka, Matthew James
- Hogan, William
- Manini, Todd M.
- Muller, Keith E.
- Shenkman, Elizabeth Ann

Associate Professor

- Gregory, Megan E.
- Guo, Yi
- Liu, Mei

- Salloum, Ramzi George
- Staras, Stephanie Ann
- Vogel, Walter B.
- Wu, Yonghui

Assistant Professor

- Al Mardini, Mamoun Tawfiq Hashim
- Kaufmann, Christopher Norfleet
- Lemas, Dominick
- Ray, Jessica M.
- Theis, Ryan P.
- Xu, Jie
- Yin, Rui

Clinical Associate Professor

- Varnes, Julia Rae

Research Assistant Professor

- LeLaurin, Jennifer Hart

Affiliated Faculty

- Al-Ani, Mohammad Ahmad Zaki
  Clinical Assistant Professor
- Duncan, William Dupree
  Clinical Associate Professor
- George, Thomas J.
  Professor
- Khalil, Georges Elias
  Assistant Professor
- Maldonado Molina, Mildred Merisa
  Professor
- Sarder, Pinaki
  Associate Professor
- Tomar, Scott
  Professor