IMPORTANT: This syllabus form should be submitted to OAA (gsbs_academic_affairs@uth.tmc.edu) a week before the start of each semester.

NOTE to STUDENTS: If you need any accommodations related to attending/enrolling in this course, please contact one of the Graduate School's 504 Coordinators, Cheryl Spitzenberger or Natalie Sirisaengtaksin. We ask that you notify GSBS in advance (preferably at least 3 days before the start of the semester) so we can make appropriate arrangements.

Term and Year: **Fall 2024** Course Number and Course Title: **GS21 1232: Translational Sciences: From Bedside To Bench and Back** **Credit Hours: 2** Meeting Location: **MDACC/Basic Science Research Building (BSRB)** Building/Room#: **BSRB S3.8112** WebEx/Zoom Link: **N/A**	Program Required Course: **Yes** Approval Code: **No** Audit Permitted: **Yes** Classes Begin: **August 28, 2024** Classes End: **December 4, 2024** Final Exam: **Dec. 9-13 , 2024**

Class Meeting Schedule

Day	Time
Wednesdays	**4:00-6:00 p.m.**

Course Director Name and Degree: **E. Scott Kopetz, MD, PhD, FACP** Title: **Professor and AVP Translational Integration** Department: **GI Medical Oncology** Institution: **MDACC** Email Address: **skopetz@mdanderson.org** Contact Number: **713-792-3617** **NOTE:** Office hours are available by request. Please email me to arrange a time to meet. **Teaching Assistant**: **Akhila Pathasarthy** **aparthasarathy1@mdanderson.org**	**Instructor/s** **See the attached Class Schedule**

Course Description:

This is an integrated, multidisciplinary course designed to provide students with the necessary tools to devise, fund, implement, and publish exemplary research involving patients or materials obtained from a human source. Students participating in this course will gain an understanding of the depth, complexity, and limitations of integrating laboratory and clinical research into investigations of human disease.

Textbook/Supplemental Reading Materials

- None

Course Objective/s:

Upon successful completion of this course, students will

Understand the importance of translational research: using laboratory findings to benefit human patients (bench to beside) and investigating clinical observations in the laboratory (bedside to bench). This course is distinct from Human Protocol Research (GS21 1132): This course focuses on the interrelationship between laboratory-based and clinical research. A culture that fosters translational research of the highest quality requires laboratory and clinical investigators to appreciate the scientific complexity of patient-oriented translational research.

***Specific Learning Objectives*:**

1. Provide an overview of the necessary tools to devise, fund, implement and publish exemplary research involving patients or materials used from a human source.
2. Provide an introduction to the depth, complexity and limitations of integrating laboratory and clinical research into investigations of human disease.
3. To provide an overview of the importance of translational research: using laboratory findings to benefit human patients (bench to bedside) and investigating clinical observations in the laboratory (bedside to bench).
4. To provide a foundation of knowledge on the interrelationship between laboratory-based and clinical research.

Student Responsibilities and Expectations:

1. Review course material (lecture slides) prior to class every week.
2. Active participation in and contribution to course discussions during lecture is expected.
3. 85% attendance required (i.e., 2 absences allowed)
4. Students must complete written exam (multiple choice, true/false, essay take-home exam) based on lectures.

Students are expected to review course material prior to class. Plagiarism will not be tolerated and is grounds for dismissal from the course and further GSBS disciplinary action. Cheating or engaging in unethical behavior during examinations (quizzes and final) will be grounds for dismissal from the course without credit and further GSBS disciplinary action.

Grading System: **Letter Grade (A-F)**

Student Assessment and Grading Criteria : *(May include the following:)*

Percentage	Description
Final Exam (60 %)	**Take-home exam (Multiple Choice, T/F, Essay)**
Participation and/or Attendance (40 %)	**Participation in the discussions, 85% attendance required**

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First Day of Class: August 28
Classes Cancelled (Holiday): November 27
Last Day of Class: December 4
Final Exam Week: December 9-13, 2024

FALL 2024
GS21 1232 Translational Sciences: From Bedside to Bench and Back

Formal Registration through UT Graduate School of Biomedical Sciences (GSBS)
4:00 p.m. – 6:00 p.m. Wednesday evenings
MD Anderson Cancer Center – BSRB S3.8112

Course Requirements:

- **85% attendance required (i.e., 2 absences allowed)**
- **Students must complete written exam (multiple choice, true/false, essay take home exam).**
  - **Take home exam must be returned by Monday, 12/9/24.**
- **Grading:**
  - **40%: Participation in class discussion**
  - **60%: Final exam**

DATE	LECTURE	INSTRUCTOR	TITLE(S) ~ AFFILIATION
8/28/2024	Course Introduction: Bedside to Bench and Back	Scott Kopetz, MD, PhD	**Professor and Deputy Chair,** Department of GI Medical Oncology **AVP**, Translational Integration
9/4/2024	Why is Pancreatic Cancer Such a Deadly Disease and What Can We Do About It	Anirban Maitra, MBBS	**Professor,** Department of Pathology, Anatomical
9/11/2024	How to build efficient translational pipelines for rare diseases: the renal medullary carcinoma paradigm	Pavlos Msaouel, MD, PhD	**Assistant Professor**, Genitourinary Medical Oncology
9/18/2024	Genomic Landscape of Colorectal Pre-Cancers in Hereditary High-Risk Populations: The case of Lynch Syndrome	Eduardo Vilar-Sanchez, MD, PhD	**Chair Ad Interm**, Department of Clinical Cancer Prevention
9/25/2024	Rational Design of Tumor-Specific Therapeutic and Biomarker Strategies through Reverse Translational Studies	Sangeeta Goswami, MD, PhD	**Assistant Professor**, Department of Genitourinary Medical Oncology
10/2//2024	Translational Advances in Cellular Therapy into the Clinic	Cassian Yee, MD	**Professor**, Department of Melanoma Medical Oncology
10/9/2024	Translational research in head and neck cancers	Faye Johnson, BS,MD, PhD	**Professor**, Department of Thoracic-Head & Neck Med Onc
10/16/2024	Mechanisms of resistance and toxicity to immune checkpoint therapy	Jianjun (JJ) Gao, MD, PhD	**Associate Professor**, Department of Genitourinary Medical Oncology
10/23/2024	From Bench to Bedside and Back: A Drug Combination Example.	Lawrence Kwong, PhD	**Associate Professor**, Department of Translational Molecular Path

10/30/2024	Epigenetics: Cancer Biology & Therapies	Joya Chandra, BS, PhD	**Professor,** Department of Pediatrics-Research
11/62024	DNA Repair Inhibitors: From Bedside to Bench and Back	Timothy Yap, PhD, MBBS	**VP,** Department of Head of Clinical Dev, Therapeutics Discovery
11/13/2024	Single-cell and spatial analysis of lung cancer	Humam Kadara, PhD	**Associate Professor**, Translational Molecular Path
11/20/2024	Translational Research in Leukemia	Tapan M. Kadia, MD	**Professor,** Department of Leukemia
11/27/2024		**Holiday**	
12/4/2024	Translational Computational Oncology	John Paul Shen, MD	**Assistant Professor**, Department of GI Medical Oncology Anderson
12/9-12/13	**Final exam due**		

Contact Information - MD Anderson

Course Director

Scott Kopetz, MD, PhD
Professor and Deputy Chair
Department of GI Medical Oncology
Del and Dennis MCCarthy Distinguished Professor
AVP Translational Integration
VP, Research Department
MD Anderson Cancer Center
skopetz@mdanderson.org

Teaching Assistant:
Akhila Pathasarthy
Graduate Research Assistant - GSBS

Regina Stephens
Executive Assistant
Department of GI Medical Oncology
MD Anderson Cancer Center
rlstephens1@mdanderson.org

Contact Information - Graduate School of Biomedical Sciences (GSBS)

GSBS

Lourdes (Bunny) Perez
Senior Student Affairs Coordinator
Dean's Office (713) 500-9871
Lourdes.V.Perez@uth.tmc.edu