

## MGT 158. Real Estate and the Tech Sector (4 units)

INSTRUCTOR/PROFESSOR: Barbara Bliss, PhD

EMAIL: BBliss@ucsd.edu

OFFICE HOURS: by appointment

TEACHING ASSISTANT: Akshay K Chaudhary

EMAIL: akchaudh@ucsd.edu

### DESCRIPTION

This class provides an introduction to the emerging real estate tech sector. In the class, we examine how newly available technologies such as AI (artificial intelligence) approaches, big data, natural language processing, and machine learning technologies are transforming different approaches and stakeholders positions in the real estate value chain. The class introduces novel quantitative and visualization methods for analyzing real estate and urban big data, approaches on utilizing and visualizing large datasets, and logics of real estate decision and valuation structures. In addition, we will also analyze digitization trends, automated valuation approaches, and novel financial models in real estate and the tech sector. The class, here, specifically stresses the shifting digital, technology, and financial landscape from the perspective of real estate users, agents, brokers, developers, and regulators.

**Prerequisites:** upper-division standing.

### CLASS STRUCTURE:

WEEK	TOPICS	READINGS & ASSIGNMENTS
Week 1 March 30 <sup>th</sup>	Introduction to Real Estate and the Technology Sector & Current Trends	Read: Getting Ahead of the Market (please ready by April 6 <sup>th</sup> ).
Week 2 April 6 <sup>th</sup>	Residential Segment 1  -Please download Python (newest version (3.8 or higher) from Anaconda)	Assignment #1 HBS Case: Redfin: Redfine Real Estate (Due April 13 <sup>th</sup> )  Read: HBR: The Ethics of Smart Devices that Analyze How We Speak (before April 13 <sup>th</sup> )  Suggested Readings: -WSJ: Boomers Want to Stay Home -Why Technology Hasn't Fixed the Housing Crisis

<p>Week 3 April 13<sup>th</sup></p>	<p>Residential Segment 2:  -Discussion of Redfin Case -Data cleaning -Smart Home Technologies</p>	<p>Assignment #2 HBS Case: Homezilla: Attracting Homebuyers through Better Photos (Due April 27<sup>th</sup>)  Read: What is Disruptive Innovation? (for Week 4)</p>
<p>Week 4 April 20<sup>th</sup></p>	<p>Commercial Real Estate Segment 1  -Machine Learning -Commercial Real Estate: Hotels Overview of Digital Transformation</p>	<p>Assignment:  Read: Simple Rules for Designing Business Models by Sayan Chatterjee for Airbnb Case.  HBS: Airbnb Business Model Developments and Future Challenges Due April 27<sup>th</sup>)  Reading: Digital Doesn't Have to be Disruptive (for April 27th)</p>
<p>Week 5 April 27<sup>th</sup></p>	<p><b>Commercial Real Estate Segment 2</b>  -Discuss Airbnb Case -Sentiment Analysis/Deep Learning Segment: Commercial Real Estate: Retail</p>	<p>Assignment:  HBS case: Property Guru: Driving AI Powered Real Estate (Due May 11)</p>
<p>Week 6 May 4<sup>th</sup></p>	<p><b>Midterm 1</b></p>	
<p>Week 7 May 11<sup>th</sup></p>	<p>Commercial Real Estate segment 3: Segment: Retail</p>	<p>Assignment:  HBS Case: Amazon Go: Venturing into Traditional Retail (Due May 18<sup>th</sup>)  Reading: Digital Ubiquity: How connections, sensors, and Data are Revolutionizing Business (for May 18<sup>th</sup>)</p>
<p>Week 8 May 18<sup>th</sup></p>	<p>Segment: Commercial Real Estate segment 4: Office Space</p>	<p>Assignment: HBS Case: WeWork: Tech Comes to Commercial Real Estate (Due May 25<sup>th</sup>)  Read: Wall Street Landlords turn American Dream into a Nightmare (before week 9 lecture)</p>
<p>Week 9 May 25<sup>th</sup></p>	<p>Discuss WeWork Case</p>	<p>Assignment:</p>

	Segment: Blockchain and Tokenization of Real Estate	HBS Case: Prodigy Network: Democratizing Real Estate Design and Financing (Due June 1 <sup>st</sup> )  Read: Estonia, The Digital Republic  Read: How Smart, Connected Products are Transforming Competition (For Week 10's lecture).
Week 10 June 1 <sup>st</sup>	Discussion of Prodigy Network Case Segment: Securitization of Real Estate  Smart Cities Segment	
<b>Exam Week</b>	<b>Final: June 7<sup>th</sup></b>	

**The schedule provided is preliminary and subject to change. Additional article readings may be added throughout the course.**

**CASES:**

This class will utilize case base methods to solidify concepts learned throughout the course. Please purchase the cases that will be covered in class from the following link:

<https://hbsp.harvard.edu/import/818210>

The course pack will contain 7 cases, along with supplementary material needed to complete the cases. The course pack costs \$27.95

HBS Case: Redfin: Redefine Real Estate

HBS Case: HomeZilla: Attracting Homebuyers through Better Photos

HBS Case: Airbnb Business Model Development and Future Challenges

HBS Case: PropertyGuru: Driving AI Powered Real Estate

HBS Case: Amazon Go: Venturing into Traditional Retail

HBS Case: WeWork: Tech Comes to Commercial Real Estate

Harvard Articles: <https://reserves.ucsd.edu/ares/>

The articles can be freely accessed via the EBSCO Business Source Complete database: <http://uclibs.org/PID/126938>. For students to access the database and other library resources from off-campus, connecting to the campus network is required. Find instructions for connecting to the campus network on the [Connecting From Off-Campus](#) page.

Alternatively, the articles can be accessed by signing in to [Digital Reserves](#) using your AD login. For students to access digital reserves from off-campus, connecting to the campus network is required, as well.

**GRADING**

Assignments	Points [or percentage]
Assignments (7 Assignments: 8% each)	56%
Midterm	22%
Final	22%
<b>Total</b>	<b>100%</b>

**Course letter grades will be based on the following:**

93.0 – 100%	:	A
90.0 – 92.99	:	A –
87.0 – 89.99	:	B +
83.0 – 86.99	:	B
80.0 – 82.99	:	B –
77.0 – 79.99	:	C +
73.0 – 76.99	:	C
70.0 – 72.99	:	C –
60.0 – 69.99	:	D
Less than 60.0:		F

**Class Expectations**

It is expected that students attend the live Zoom lectures and participate in the class discussions on the relevant topics.

**COURSE POLICIES**

Attendance: You are expected to attend every class. You are responsible for the material covered in class. In the event that you are unable to attend class, you are responsible to obtaining any missed assignments or lecture notes.

**ACADEMIC INTEGRITY**

Integrity of scholarship is essential for an academic community. As members of the Rady School, we pledge ourselves to uphold the highest ethical standards. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind.

The complete UCSD Policy on Integrity of Scholarship can be viewed at:

**How the Honor Code applies to this course:**

Students are expected to complete the course in compliance with the instructor's standards. No students shall engage in any activity that involves attempting to receive a grade by means other than honest effort. For example, no student shall knowingly procure, provide, or accept any unauthorized material that contains questions or answers to any examination or assignment to be given at a subsequent time. No student shall complete, in part or in total, any examination or assignment for another person. No student shall plagiarize or copy the work of another person and submit as his or her own work. No student shall employ aids excluded by the instructor in completing any exam or assignment. No student shall alter graded class assignments or examinations, and then re-submit them for re-grading.

**STUDENTS WITH DISABILITIES**

A student who has a disability or special need and requires an accommodation in order to have equal access to the classroom must register with the Office for Students with Disabilities (OSD). The OSD will determine what accommodations may be made and provide the necessary documentation to present to the faculty member. The student must present the OSD letter of certification and OSD accommodation recommendation to the appropriate faculty member in order to initiate the request for accommodation in classes, examinations, or other academic program activities. **No accommodations can be implemented retroactively.** Please visit the [OSD website](#) for further information or contact the Office for Students with Disabilities at (858) 534-4382 or [osd@ucsd.edu](mailto:osd@ucsd.edu).

**TITLE IX**

The Office for the Prevention of Harassment & Discrimination (OPHD) provides assistance to students, faculty, and staff regarding reports of bias, harassment, and discrimination. OPHD is the UC San Diego Title IX office. Title IX of the Education Amendments of 1972 is the federal law that prohibits sex discrimination in educational institutions that are recipients of federal funds. Rady students have the right to an educational environment that is free from harassment and discrimination.

Students have options for reporting incidents of sexual violence and sexual harassment. Sexual violence includes sexual assault, dating violence, domestic violence, and stalking. Information about reporting options may be obtained at OPHD at (858) 534-8298, [ophd@ucsd.edu](mailto:ophd@ucsd.edu) or <http://ophd.ucsd.edu>. Students may receive confidential assistance at CARE at the Sexual Assault Resource Center at (858) 534-5793, [sarc@ucsd.edu](mailto:sarc@ucsd.edu) or <http://care.ucsd.edu> or Counseling and Psychological Services (CAPS) at (858) 534-3755 or <http://caps.ucsd.edu>.

Students may feel more comfortable discussing their particular concern with a trusted employee. This may be a Rady student affairs staff member, a department Chair, a faculty member or other University official. These individuals have an obligation to report incidents of sexual violence and sexual harassment to OPHD. This does not necessarily mean that a formal complaint will be filed. If you find yourself in an uncomfortable situation, ask for help. The Rady

School of Management is committed to upholding University policies regarding nondiscrimination, sexual violence and sexual harassment.