USC PRICE SCHOOL OF PUBLIC POLICY
MRED PROGRAM - SPRING 2019

RED545: ADVANCED REAL ESTATE & FINANCIAL MODELING

PRELIMINARY SYLLABUS

Instructor: Ehud G. Mouchly
Class Schedule: Four Saturday sessions from 9:00am to 5:00pm:
                   January 12; February 2; March 2, March 30
Location: TBD

1) Course Description, Objectives and Prerequisites:

a) This course is designed to give you a competitive edge through training in efficient quantitative real estate problem solving. We will focus on computerized modeling as an integral tool in decision making and deal structuring. The course will be of greatest benefit to those of you who already have experience in financial and real estate analysis by learning advanced interpretive and technical skills using computerized spreadsheet software.

b) The advanced nature of the course refers to the complexity of the problems that we will analyze and to the technical level of spreadsheet analysis and modeling. As a prerequisite to attending this course, you are expected to have working knowledge of real estate accounting and finance. You should also have generalized spreadsheet skills, such as spreadsheet commands and functions, simple macros, use of range names, dynamic linking, etc.

c) You will receive the first "homework" assignment prior to the first meeting of the class. I will determine the eventual instruction level of the course at the first meeting of the class based on your initial work product. That level will depend on my evaluation of the range of registered students' demonstrated real estate finance and accounting knowledge, and modeling skill levels.

2) **Course Plan:** Like all good plans, this plan, too, is a basis for change... The following course plan is subject to the general level of knowledge and skills set of members of the class. It is an [adjustable] plan for the course that may change to be more or less advanced, as appropriate.

a) 1st session:

   i) "Why model?" Introduction to financial and real estate modeling;

   ii) Nuts and bolts of model building;

   iii) Class exercise to determine real estate accounting and finance knowledge and modeling aptitude of registered students. Revisiting the 1st assignment;

   iv) Briefing on take-home assignment

b) 2nd session:

   i) Review of take-home assignment

   ii) Dynamic relationships between absorption and lease-up or sales, revenues and cost projections;

   iii) Complex debt financing, including lender participation, subordination, etc.;

   iv) Briefing on take-home assignment

c) 3rd session:

   i) Review of take-home assignment

   ii) Joint venture / partnership structuring and deal modeling. This will include preferences and priority distributions between classes of partners, such as look-back-IRR and look-back-ROI ("waterfalls"), etc.;

   iii) Modeling problems in land development, home-building and mixed-use projects;

   iv) Systematic and inferential sensitivity analysis;

   v) Briefing on take-home assignment

d) 4th session:

   i) Review of take-home assignment

   ii) Systematic treatment of real estate portfolios;

   iii) Presentation techniques;

   iv) Practical applications of computerized models: avoidance of overkill and underkill;

   v) Utilization of internet and intranet networks for joint modeling by project teams

   vi) Briefing on take-home "Final."

3) <u>Teaching Method</u>

a) The basic course format will be generating and working through real estate computerized business models and case studies, including simulations, analytical calculations, identification of key analytic issues and inferential modeling. We will make time during class for discussion and hands-on Q&A.

b) Our sessions will be in a workshop format combining lecture and interactive sessions devoted to skill-building in advanced real estate financial analysis, modeling, exercises and review of assignments. If you need introductory or remedial training in basic spreadsheet use and real estate financial analysis, this is **not** the place.

c) Student-submitted case studies are encouraged. If yours is a particularly thoughtful and interesting project, you will be allowed – subject to discretionary approval – to substitute your project analysis in lieu of class assignments.

d) In addition to the "homework" session assignments, short periodic readings will also be assigned.

4) <u>Prerequisites for Registered Students</u>:

a) Successful completion of RED542 (or equivalent) and either successful completion or concurrent attendance in RED546 (or equivalent);

b) A solid working knowledge of real estate financial analysis, understanding of real estate accounting, and spreadsheets use;

5) <u>Auditing the Course</u>:

a) Registered students may audit the class with prior instructor permission;

b) Auditing students need not submit assignments. They will be asked to sit in the "peanut gallery." Registered students will have absolute priority in class discussions.

6) <u>Hardware & software:</u> All students must have a laptop / notebook computer in their possession. Joint work on a single computer or networked shared work in class is counter-productive and will not be allowed. Microsoft Excel (Excel 2016) will be the spreadsheet of instruction. Some assignments may require use of Microsoft Word and PowerPoint.

7) <u>Communications:</u> All students must have e-mail accounts capable of attaching and detaching, encoding and decoding Microsoft Office and Adobe Acrobat PDF files. Homework assignments and reviews will be handled only via e-mail.

8) <u>Suggested / Recommended Readings</u>

There is no mandatory textbook for this class. However, you will benefit by referring to appropriate sections in the following books and resources (in no particular order):

a) Brueggeman & Fisher. Real Estate Finance & Investments, 16th edition, 2017, McGraw-Hill Education

b) Peiser & Hamilton. Professional Real Estate Development, 2012, Washington: the ULI

c) Long. Finance for Real Estate Development, 2011, Washington: the ULI

d) Walkenbach, John. Microsoft Excel 2016 ("Excel 2016 Bible"), 2015, Wiley

e) Staiger, Foundations of Real Estate Financial Modelling, 2015, Routledge

f) Zuckerman & Blevins. Real Estate Development Workbook and Manual, Paramus: Prentice Hall (out of print, but worth looking for)

g) Zuckerman. Real Estate Investment and Acquisition Workbook, Aspen Law & Business Publishers (out of print, but worth looking for)

h) Online training and support resources, e.g.:

   i) https://support.office.com/en-us/article/Excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb

   ii) https://www.lynda.com/learning-paths/Business/master-excel-2016 - accessible through your personal account at www.usc.edu/its/Lynda

9) **Grading**:   A letter grade will be awarded to registered students, weighted as follows:

a) 1/3, for class participation, including: real-time spontaneous solutions for modeling financial and real estate issues; suggestions for alternative solutions to modeling problems; demonstration of inferential thinking; application of theories learned in RED 542 and RED 546 or equivalent courses to real world problems.

b) 1/3, for demonstration of increased skill levels from session to session through take-home assignments;

c) 1/3, for "Final" take-home assignment. There will not be a final examination.

10) **Class Schedule**: Class will meet every three or four weeks (01/12/19, 02/02/19, 03/02/19, 3/30/19). Attendance in class meetings is mandatory. We will also convene weekly for an optional video conference.

11) **Office Hours:** TBD

12) **Statement on Academic Conduct and Support Systems**

a) **Academic Conduct**

   Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with

the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards* *http://studentaffairs.usc.edu/scampus/*

b) Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, *http://policy.usc.edu/scientific-misconduct/*

c) Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

d) **Support Systems**

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the American Language Institute http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information http://emergency.usc.edu/will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

"DURING THE TIME YOU'VE BEEN CREATING THE COMPUTER MODEL, WE'VE BUILT IT"