Course Syllabus
FIR 8725 – Equity Market Trading and Microstructure
Fall Semester, 2015
3 Credit Hours

(Last updated: 7/8/2015)

Instructors: Dr. Pankaj K. Jain (nickname PK), MBA, CFA, Ph.D.

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Phone: 901-678-3810
URL: https://fcbeacad.memphis.edu/faculty/list/faculty_details.php?id=92

Office Hours: By appointment in FCBE 402

Course Overview:

The purpose of this course is to make you a skillful finance researcher. Good research is necessary for your progress in the academic career at every stage beginning from success in this course, the comprehensive exam, dissertation, conference presentation, publication, tenure, promotion, endowed chairs and beyond.

Pre-Requisites/Co-Requisites:

There are no course pre-requisites to enrolling in this course. However, the student should have a good grasp of basic mathematics and applied writing skills. In general, it is assumed that all students who are registering for Fogelman College classes have successfully completed any pre-requisites or are enrolled currently in any co-requisites associated with this course.

Required Texts (and Related Materials):

You must read the assigned market microstructure paper listed under each session in the course website http://www.elearn.memphis.edu to score well in the quizzes and class participation.
Consistently asking critical questions and making suggestion for extending the paper being presented will add to your participation grade.

You will also need to master the processing and analysis of market microstructure datasets such as TAQ and ITCH in addition to other datasets for control variables.

Homework and project assignment will make you knowledgeable about Market microstructure tools.

Excellent reference books are published by Edward Elgar Publishing under the title *International Library of Critical Writings in Financial Economics*.

**Guidelines for Presenting the Papers in Class**

Present the following:

- **Motivation** (importance of the idea, its applications or usefulness from the perspective of academics, equity or bond investors, companies, regulators etc.)
- **Model** setup for theory papers; **Hypothesis development** for empirical papers.
- **Derivation and Proofs** for theory papers; **Research design** for empirical papers.
- **Testable predictions** for theory papers; **Main results** for empirical papers.
- Your **referee report**, as discussed above, for the paper.
- For **survey papers**, please cover the main ideas and provide citations and some numerical examples.

**ORIGINAL RESEARCH PAPER PROJECT**

You are to develop an original research paper following the three round process listed below. Inventing a completely original idea should be your long term goal as those can make a big difference on the profession and might bring you recognition and rewards, such as a noble prize. However, when you are just getting started, your more realistic goal should be extend or apply an existing model and get it published. A publication will tremendously improve your job placement.

We will adopt the following 3-tier approach:

**Round 1.** Identify one of the papers on the course syllabus (you may skip ahead to one of the papers we have not yet covered) and brainstorm two-to-three possible extensions that could be made to the model or the empirical analysis. The round 1 write-up (which can be handwritten if you wish) should specify for each possible extension:

* what the extension is
* what key *result* you hope to obtain - what is new? what is surprising? (*Results* sell papers.)
* the result’s theoretical significance (if any),
* the result’s empirical significance (if any),
* the result’s practical significance (if any),
* the extension’s feasibility, and
* the extension’s degree of difficulty.

Response 1. Stop by my office and we will discuss the merits of each possible extension.

Sometimes students come up with excellent research ideas and pursue that idea for subsequent rounds. More frequently, faculty guidance is necessary in identifying a research topic that is important and publishable. Thus, students can benefit by joining an ongoing project with a faculty member.

Round 2. Do your research. Write up it up in the standard format of an academic paper. Submit your paper as a WORD document in the elearn submission portal. Your write up should include:

* a title page
* an abstract
* an introduction with motivation and intuition
* a very brief literature review - focus on the one or two papers that are the most directly relevant to your extension - I want you to focus your effort on your extension and not on reading extra articles.
* explain hypotheses you are going to test
* data you are using and ways you cleaned-up the data
  Data collection can take a couple of weeks
* SAS code and Macros (put as Appendix)
  Generating Tables is the main task and will take at least one month’s work
* results in tables (can be in the body or in the back)
  Generating Tables is the main task and will take at least one month’s work
* interpretations of results
* step-by-step develop and explain the model (if theoretical) -- explain each idea once in math and a second time in words
* flag key assumptions and results (if theoretical)
* optional: comparative statistics and other ways to milk the model / design for all it is worth (if theoretical)
* list of possible directions for future research
* a brief conclusion.

Class Presentation. Develop a twenty-minute presentation for the class that explains:

* what your are research question(s),
* what is the motivation for this line of research,
* what are hypotheses are you going to test,
* what data are you using,
* what are your results to date, and
* what are your key interpretations / intuitions for your results.

Response 2. I will add comments on both the substance and exposition in your paper by writing a referee report on your paper. In my office I can provide additional explanation of my comments, if needed.
Round 3. Incorporate a response to my comments. Add any additional results and polish the exposition. Write a one-page "response to the referee" report explaining with terse bullet points how you have responded to my comments and what additional items have been added. Submit your final version and your response to the referee report as WORD files to pjain@memphis.edu.

Response 3. Your final grade for the research paper will be based on the paper and response to the referee report you turn in for round 3. All elements discussed above will be reflected in the grade.

Location of Course Materials:

Electronic papers can be downloaded from various databases in Memphis libraries like Science Direct, Jstor, Econlit etc. To access these datasets Go to www.memphis.edu; Click on Current students; Libraries; All Databases A-Z; Science direct OR Jstor OR Econlit; Click Yes to the certificate authentication, if asked; Select usertype as The University of Memphis; Enter your username and password)

Key Professional Web Sites

SSRN includes FEN | AFA includes JF | WFA | FMA | Worldwide Finance Directory | Ohio State Site List

Download PDF files from the Entire Finance Literature

Google Scholar - a new search service that allows you to find academic articles


Major financial news sites: Bloomberg, CBS MarketWatch, CNN/Money, FT Investor (Financial Times), MSN Money (CNBC), Yahoo! Finance, Google Finance

Course Objectives:

Please visit the following URL:
http://www.fcbeassessment.net/LearningOutcomes/PhDDegreeLearningOutcomes.pdf

Fogelman College: Learning Outcomes for Your Degree

PhD
http://www.fcbeassessment.net/LearningOutcomes/PhDDegreeLearningOutcomes.pdf

Course Methodology:

The class will meet on campus on every Wednesday morning. Students are encouraged to establish connectivity to the research server.

Professor’s Expectations:

1. Your success in this class is important to me. I will be available to assist you in every possible way of enhancing your learning experience and helping you make new discoveries to advance the frontiers of knowledge.
2. Students are expected to stay current in their reading assignment preparation and make and communicate daily progress on their project.
3. Utmost ethical conduct is expected from everyone. Academic dishonesty and cheating will result in the appropriate academic and university penalties to the extent that an "F" may be assigned for the course grade and the student may be dismissed from the University for Disciplinary Reasons.
4. Caution: The course instructor does not have access or control over administrative issues such as meeting admissions criteria for the Graduate School or completion of prerequisites, if any, by the students. Please contact the program director for any administrative questions.

Student's Expectations:

In my role as your instructor, there are certain things you can expect from me including: well-organized and engaging learning experience, response to email/skype within three (3) business
days (most likely sooner) and feedback on your work when you present or bring it up during class sessions or by email / skype.

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**Grading and Evaluation Criteria:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class participation and activities</td>
<td>25%</td>
</tr>
<tr>
<td>Referee reports, Homework, Quizzes, Exams</td>
<td>35%</td>
</tr>
<tr>
<td>Research project</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Final Course Grades:**

The letter grade equivalent for the total points that you score in the course are as follows:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.1 –100</td>
<td>A+</td>
</tr>
<tr>
<td>92.1 - 96</td>
<td>A</td>
</tr>
<tr>
<td>88.1 - 92</td>
<td>A-</td>
</tr>
<tr>
<td>84.1 – 88</td>
<td>B+</td>
</tr>
<tr>
<td>80.1 - 84</td>
<td>B</td>
</tr>
<tr>
<td>75.1 - 80</td>
<td>B-</td>
</tr>
<tr>
<td>70.1 – 75</td>
<td>C+</td>
</tr>
<tr>
<td>65.1 - 70</td>
<td>C</td>
</tr>
<tr>
<td>60.1 – 65</td>
<td>C-</td>
</tr>
<tr>
<td>56.1 – 60</td>
<td>D+</td>
</tr>
<tr>
<td>50.1 - 56</td>
<td>D</td>
</tr>
<tr>
<td>Below 50.1</td>
<td>F</td>
</tr>
</tbody>
</table>

**Final Exam Schedule:**

The final exam for this class will be scheduled according to the Registrar’s academic calendar website.

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**Course Policies:**

1. Your success in this class is important to me. I will be available to assist you during office hours or by appointment. Please feel free to ask for an appointment or drop by my office.
2. Students are expected to stay current in their reading assignment preparation before class and regularly visit the class and the course website.
3. Utmost ethical conduct is expected from everyone. Academic dishonesty and cheating in the completion of any course requirement will result in the appropriate academic and university penalties to the extent that an "F" may be assigned for the course grade and the student may be dismissed from the university for disciplinary reasons.
4. All reports should be submitted on or before due date. DELAYED REPORTS WILL NOT BE ACCEPTED AND THERE WILL BE NO MAKE-UPS for any course activity.
5. Cellular phones/pagers must be turned off in class except for vibrating signal.
6. WARNING: If you have not met admissions criteria for the Graduate School and this section is checked for graduate School requirements, you may be administratively dropped. This will also happen if you have not completed the prerequisites for this course.

E-MAIL:

All students are required to maintain and access their University of Memphis (@memphis.edu) email account. You will receive all official course correspondence at this email account. Any inability to receive incoming mail in a timely fashion (e.g., not regularly checking your email, having a “full mailbox” condition, etc.) is the student’s responsibility.

Attendance:

Active participation and attendance is expected.

Adding/Dropping:

If you have questions about adding or dropping classes, please refer to this page on the Registrar’s website.

Academic Integrity:

The University of Memphis has clear codes regarding cheating and classroom misconduct. If interested, you may refer to the Student Handbook section on academic misconduct for a discussion of these codes. Note that using a “Solutions Manual” is considered cheating. Should your professor have evidence that using a “Solutions Manual” has occurred, he/she may take steps as described on the campus’ Office of Student Conduct website. If you have any questions about academic integrity or plagiarism, you are strongly encouraged to review the Fogelman College's Website on Academic Integrity.

Classroom or Online Behavior:

1. Your success in this class is important to me. I will be available to assist you during office hours or by appointment. Please feel free to ask for an appointment or drop by my office.
2. Students are expected to stay current in their reading assignment preparation before class and regularly visit the class and the course website.
3. Utmost ethical conduct is expected from everyone. Academic dishonesty and cheating in the completion of any course requirement will result in the appropriate academic and university penalties to the extent that an "F" may be assigned for the course grade and the student may be dismissed from the university for disciplinary reasons.
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**Late Assignments:**

Late assignments will not be accepted, except under extraneous circumstances, and as arranged in advanced between instructor and student.

**Extra Credit:**

There is no extra credit offered in this course. Your final grade will be computed based on your work on the formal/assessed activities previously described in this syllabus.

**Reporting Illness or Absence:**

Due dates and deadlines have been established for each graded assignment. In this course, deadlines are taken very seriously. Please do not wait until the last day to submit assignments or to take quizzes and exams. If an emergency should arise, it is the student’s responsibility to contact the instructor prior to the deadline to discuss the matter. A deadline extension will be considered only if all of the following conditions are met:
1. Extreme emergency and
2. Instructor contacted prior to the due date.

**Inclement Weather:**

In the event that inclement weather requires the cancellation of classes at The University of Memphis, local radio and television media will be immediately notified. Additionally, The University of Memphis has established an Inclement Weather Hotline at 678-0888 as well as TigerText, an emergency alert text messaging service to students, faculty and staff. This optional service is used in the event of an on-campus emergency, an unscheduled university closing, or a delay or cancellation of classes due to, for instance, inclement weather. Click [Here](#) for information on TigerText.

**Syllabus Changes:**

The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by individual email communication and posting both notification and nature of change(s) on the course bulletin board.
Student Services:

Please access the FCBE Student Services (New Window) page for information about:

- Students with Disabilities
- Tutoring and other Academic Assistance
- Advising Services for Fogelman Students
- Technical Assistance