Course Syllabus
Graduate BUSFIN 7218 – Fixed Income Securities
Undergraduate BUSFIN 4218 – Fixed Income Securities
Spring 2019

Class Times and Locations
Tue & Thu 4:30-6:00PM
Gerlach Hall 365
Bloomberg Lab Mason 147
Final Exam: Tentatively scheduled for last day of class, Thursday April 18, 2019.

Course Credits
1.5 Units

Instructor: Jim Sexton
Office: 255 Fisher Hall (shared space, not fully private)
Office Hours: Tue & Thu 3:00-4:00PM
E-mail: Sexton.151@osu.edu, or jsexton1956@gmail.com

Course Description and Expectations
Fixed Income Securities (BUSFIN 4218, 7218) will provide students with an introduction to the mathematics and evaluation of US Dollar denominated fixed income instruments. Students will learn the underlying terms and conditions used in the fixed income markets and apply Excel based mathematical models to evaluate the pricing, yield, risk and return attributes in the market. The course will introduce students to the discount rates and models used by practitioners and will cover:

1. US Treasury securities including: discount bills, zero coupon strips, nominal coupon bonds and inflation protected securities.
2. Select derivative instruments including Futures.
3. Corporate bonds, including discussion of the risk premiums associated with the risk of default and partial recovery.
4. Select (and simplified) Structured Securities such as Mortgage Backed Securities.
5. Risk, return and the elements of portfolio construction using the above listed instruments.

The course and associated discussion will be focused on the practices used in the Fixed Income market. Evaluation of bonds is essentially a discounted cash flow exercise, consequently, as a pre-requisite, students must understand basic financial discounting processes. Moreover, the course will include introduction (but not the theoretical foundation and proof) of the associated mathematics used in the Fixed Income markets.

The Instructor reserves the right to make and communicate changes to this Syllabus.
**Pre-Requisites**
This course will involve detailed and more complex application of financial discounting principles applied to the evaluation of Fixed Income Securities. **Students must have a good command of discounting methods and strong MS Excel skills.** Course pre-requisites include:

**Undergraduate**
BUSFIN 4221 “Investments” plus a 3.5 GPA or better

**Masters**
MBA 6223 "Finance" of BUSFIN 6211 "Finance I"

**Course Resources**
Course discussion will be drawn from a combination of textbooks and associated workbooks. Although purchasing a textbook is not required, analysis of Fixed Income Securities involves use of complex financial formulas. Consequently students should consider buying one of the following books as a supplement to the course and as a future reference for their personal library. These contain the financial formulas the professionals may need for future reference. Please also note that *Fixed Income Securities* (Pietro Veronesi), is also a book used in BUSFIN 7222 Fixed Income Analysis.


**Students must also have access to and be proficient in Microsoft Excel** to evaluate the nature of the cash flows and discount formulas used for fixed income yields, prices and risks.

**Course Evaluation**
Bonds involve discounted cash flow analysis. Consequently, student evaluation will be heavily weighted toward MS Excel based exercises

<table>
<thead>
<tr>
<th>Component</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>Weekly Student Exercises</td>
<td>70% (70 points)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30% (30 points)</td>
</tr>
<tr>
<td>Attendance, Class Participation, Instructor Discretion</td>
<td>5% (5 points)</td>
</tr>
<tr>
<td>Total Possible and Applied</td>
<td>105%, max of 100% applied</td>
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</table>

Final grades will be award using the standard OSU scale as presented below. Since the potential total contribution (above) exceeds 100%, students have the opportunity to boost their final grade by emphasizing all parts of the course evaluation. Otherwise there will be no curve adjustment.

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Class Participation (0-5%)
Class participation will be awarded on an individual basis at the sole discretion of the Instructor with emphasis on attendance and classroom participation. Participation is essentially “extra-credit” since students can earn up to 100% through completion of exercises and successful examinations (see below).

Student Exercises (70%)
Students will be expected to complete problems / exercises designed to reinforce the concepts presented in the classroom. **Exercises must be presented electronically into Canvas.**

Final (30%) Exams
The final exam may consist of two parts: a) take-home problems that can be solved using open notes and MS Excel and b) an in-class closed book, notes and materials exam covering the essential attributes discussed in class. Part A will be due at 10AM, Monday, April 30th. Part B will be conducted on the final exam date. Each part will be worth 15% toward the final grade. The Exam must be taken on the scheduled dates and times. Exceptions must be pre-arranged.

Appeals and Late Submissions
Your instructor will exercise diligence and objectivity in evaluating exercises and exams. Perceived errors in grading may be appealed in writing within 1 week after the graded work is returned. The perceived error should include reference to the specific question or exercise and explanation of how the grading may be incorrect. The instructor will be pre-disposed to retain the original score unless a clear discrepancy is identified.

Since much of the emphasis will be on completing course problems and exercises, students who miss a class and the original exercise due date will be encouraged to submit a late-dated solution. Grading will be reduced by 1.5 points after the original due date the exercise is submitted.

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submitted. For example, if a problem set is worth 10 points, 1.5 point reduction will be automatically taken, reducing the max score to 8.5 points (85%).

**Academic Integrity**
Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s Code of Student Conduct and this syllabus may constitute “Academic Misconduct.”

The Ohio State University’s Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s Code of Student Conduct is never considered an “excuse” for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct. You can find the full Code at: [https://trustees.osu.edu/sites/default/files/migrated/assets/files/RuleBook/CodeStudentConduct.pdf](https://trustees.osu.edu/sites/default/files/migrated/assets/files/RuleBook/CodeStudentConduct.pdf)

The Instructor is obligated by University Rules to report suspicions of misconduct to the Committee on Academic Misconduct.

**Accommodation, Disability Services**
The Student Life Disability Services (SLDS) [https://slds.osu.edu](https://slds.osu.edu) verifies students with specific disabilities and develops strategies to meet their needs. Students requiring accommodations based on identified disabilities should contact the Instructor at the beginning of the term to discuss their particular needs. Students with a specific disability are encouraged to contact SLDS to explore potential accommodations available to them.

**Other**
**Electronic Devices**
Use of electronic devices in the classroom can be disruptive to the user, other students and the Instructor. Students may use electronic devices for following slide presentations, taking notes and doing in-class exercises. Students should silence and put away phones and use other electronic devices coincident only with in-class instruction.

**Attendance**
Regular class attendance will be necessary in order to achieve success. Attendance will have a direct impact on the classroom participation contribution. Exams and exercises may also

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include materials discussed in the class but otherwise not covered by the textbook or classroom discussion slides. For the convenience of the Instructor, please bring your name card and repeatedly sit in the same seat during each class.

**Out-of-Class Preparation**
Students are expected in advance to be prepared for each in-class session. Out-of-class preparation includes any assigned readings, associated problems and MS Excel exercises. Students should expect to spend roughly an equal or greater amount of time for out-of-class preparation relative to in-class discussion.

**Tentative Course Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Project Due Date, Discussion, Grading</th>
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</thead>
<tbody>
<tr>
<td>1-Thu 2/28</td>
<td>Bootstrapping</td>
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<tr>
<td>2-Tue 3/5</td>
<td>Discount Curves</td>
<td></td>
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<tr>
<td>3-Thu 3/7</td>
<td>Bootstrapping Risk &amp; Return</td>
<td>Bootstraping</td>
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<td></td>
<td></td>
<td>10% of grade</td>
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<tr>
<td>4-Tue 3/19</td>
<td>Risk &amp; Return US Treasuries</td>
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<tr>
<td>5-Thu 3/22</td>
<td>US Treasuries Futures &amp; TIPs</td>
<td>Calculating KRDs</td>
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<td>10% of grade</td>
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<tr>
<td>6-Tue 3/26</td>
<td>Corporate Bonds</td>
<td>UST Curve Positioning</td>
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<td></td>
<td>10% of grade</td>
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<tr>
<td>7-Thu 3/28</td>
<td>Corporate Bonds</td>
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<tr>
<td>8-Tue 4/2</td>
<td>Residential Mortgages</td>
<td>Credit Relative Value</td>
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<td>10% of grade</td>
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<tr>
<td>9-Thu 4/4</td>
<td>Mortgages Cont.</td>
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<tr>
<td>10-Tue 4/9</td>
<td>Market Volatilities and Correlations</td>
<td>Mortgage Hedge</td>
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<td>10% of grade</td>
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<tr>
<td>11-Thu 4/11</td>
<td>Portfolio Mgt.</td>
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<tr>
<td>12-Tue 4/16</td>
<td>Portfolio Mgt.</td>
<td>Team Strategy</td>
</tr>
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<td>20% of Grade</td>
</tr>
<tr>
<td>13-Thu 4/18</td>
<td>Final Exam</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>30% of Grade</td>
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Projects are due and will be discussed at the start of class on dates shown. To get full credit you must submit the project electronically into Canvas (time stamped).

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