This team-taught course is designed to provide students with a detailed understanding of basic areas of municipal finance: (1) the municipal bond market; (2) municipal credit analysis; (3) derivatives management; and (4) timely topics in municipal finance. This course is organized and developed in segments. Part 1 begins with an overview of the fundamentals of municipal bonds. Part 2 provides a detailed examination of municipal credit analysis and Pension and OPEB liabilities. Part 3 centers upon the analysis of the use of municipal derivatives and Part 4 provides covers current topics including renewable energy and distressed credits.

**Texts and Readings**

**Municipal Credit Analysis**

**Municipal Derivatives**
- John F. Marshall and Kenneth Kapner, Understanding Swaps, Wiley Finance

**Grading:**

Grades will be developed as follows: (a) 60% of your grade will be based upon completion of a take-home assignment prescribed in each course segment; 20% for
municipal credit analysis, 20% for Pension/OPEB analysis and 20% for municipal derivatives; and (b) the remaining 40% will be based upon an integrated final project that tests basic skills acquired in different course segments.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Credit I</td>
<td>20%</td>
<td>Feb 28, 2012</td>
</tr>
<tr>
<td>Pensions and OPEBs</td>
<td>20%</td>
<td>Mar 20, 2012</td>
</tr>
<tr>
<td>Municipal Derivatives</td>
<td>20%</td>
<td>May 01, 2012</td>
</tr>
<tr>
<td>Final Project</td>
<td>40%</td>
<td>May 10, 2012</td>
</tr>
</tbody>
</table>

100%

**Class Schedule and Readings**

Set forth below is a detailed listing of class lectures, topics and corresponding reading assignments, organized for each course segment. In order to actively participate in classroom discussion, these readings are to be completed prior to class.

**Lecture 1   Fundamentals of Municipal Bonds I  (Jan. 24, 2012)**

This initial lecture will consist of a general introduction to the course and an overview of the course materials. Initial reading assignments to be completed are set forth below.

Topics to be covered in this initial class will consist of a variety of issues, including:

- Importance of municipal debt financing within American federal system
- Overview of the Municipal Bond Market
- Eligible uses of municipal debt issuance under the Federal Tax Code
- Impact of the Credit Crisis on Municipal Finance and Capital Markets
- Overview of Build America Bonds and other taxable options
### Lecture 2  **Fundamentals of Municipal Bonds II**  (Jan. 31, 2012)

This second lecture will focus upon: (a) the emergence of the municipal bond market in the US and the importance of state and local sponsorship of infrastructure projects to the development of the overall municipal market; (b) the structural imprint that unique historical forces have had on the legal framework of municipal finance; and (c) public policy benefits and challenges tied to the use of debt limits and other fiscal constraints governing the issuance of municipal debt.

Topics to be covered in this class will include:

- The historical circumstances that led to establishment of debt limitations
- The Emergence of Revenue Bonds and Public Authorities
- The Dominant Role of Revenue Bonds and User Fees
- Public Policy Implications

### Readings:

<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeking Local Government Financial Integrity Through Debt Ceilings, Tax Limitations</td>
<td>M. David Gelfand</td>
<td>545-608</td>
</tr>
<tr>
<td>Subsidizing Infrastructure With Tax-Preferred Bonds</td>
<td>CBO Joint Committee on Taxation</td>
<td>October 2009</td>
</tr>
<tr>
<td>Fabozzi &amp; Feldstein, Handbook</td>
<td>Richard Briffault</td>
<td>The Central Place of State and Local Government</td>
</tr>
<tr>
<td>The Fundamentals of Municipal Bonds</td>
<td>Judy Wesalo Temel</td>
<td>Municipal Market Overview; Regulatory Disclosure</td>
</tr>
<tr>
<td>Fabozzi &amp; Feldstein, Handbook</td>
<td>Perry Israel; Martin Mauro</td>
<td>Federal Tax Rules</td>
</tr>
</tbody>
</table>
Credit Analysis  (Lectures 3, 4, 5, 6, 7 and 8)

Instructor: Gerard J. Lian

The next segment of the course consists of learning how to evaluate credit risk with respect to discrete areas of the municipal bond market:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture 3</td>
<td>High Grade Municipal Bonds</td>
</tr>
<tr>
<td>Lecture 4</td>
<td>Intermediate Grade</td>
</tr>
<tr>
<td>Lecture 5</td>
<td>High Yield Bonds</td>
</tr>
<tr>
<td>Lecture 6</td>
<td>Public Private Partnerships</td>
</tr>
<tr>
<td>Lecture 7</td>
<td>Pension and OPEB Liabilities</td>
</tr>
<tr>
<td>Lecture 8</td>
<td>NYC Project finance</td>
</tr>
</tbody>
</table>

Your grade for the first portion of this course segments will be based upon a take-home credit analysis project for a credit selected from one of high grade sectors enumerated above which evaluates quantitative and qualitative credit factors based upon published rating criteria or other criteria extracted from the list of readings. Your grade for the second portion of this segment will be based upon analysis of a Pension and OPEB case study. Each Project will account for 20% of your final grade.

Lecture 3  **High Grade Municipal Bonds** (Feb 7, 2012)

This lecture will focus upon the credit analysis of a representative sample of investment grade municipal bonds. Topics to be covered in this class include:

1. Methodology and Framework for Analyzing Municipal Bonds
2. Review of Fund Accounting Basics
3. Credit Analysis of Specific Sectors
   - Public Power Bonds
   - Airport Bonds

This lecture will focus upon analyzing credit quality for various types of corporate-backed debt. Credits and topics to be covered in this class include:

1. Single Family Housing Bonds
2. Investor-Owned Utilities
3. Fundamentals of Bond Insurance

Readings:

| Fabozzi & Feldstein, Handbook | Van Kuller | How to Analyze SFMR Bonds | Ch. 53, pgs. 861-891 |
| Fabozzi & Feldstein, Handbook | Gary Krellenstein | PCR, IDB and Conduit Financing | Ch. 64, pgs. 1041-1048 |
| Fitch Criteria Report | | Cash Flow Measures In Corporate Analysis (10-12-05) | Pgs. 1-11 |
| Fitch Criteria Report | | Credit Rating Guidelines for IOUs (7-31-07) | Pgs. 1-11 |
| The Rise & Fall of Monolines | Part I and II | Credit Sights (11-20-08) | Pgs. 1 -12 |
Lecture 5  **High Yield Municipal Bonds** *(Feb. 21, 2012)*

This lecture will focus upon evaluating credit risk and relative value in the municipal high yield market. There will be Guest Lecturer(s) for this credit segment. Credit sectors and topics to be covered include:

- MMD Spreads in the Municipal Market
- Yield and Return Differentiation in High Yield Sector
- Leading High Yield Credit Sectors
  a. Continuing Care Retirement Communities
  b. Land Secured Debt
  c. Project Finance

<table>
<thead>
<tr>
<th>Readings:</th>
<th>Fitch</th>
<th>Rating Non-profit CCRCs (10-27-98)</th>
<th>Pgs 1-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing Care Retirement Facilities</td>
<td>Fitch</td>
<td>Rating Non-profit CCRCs (10-27-98)</td>
<td>Pgs 1-20</td>
</tr>
<tr>
<td>Land Secured Debt Financings</td>
<td>Moody’s</td>
<td>Land Secured Debt (Dec. 2008)</td>
<td>Pgs 1-4</td>
</tr>
</tbody>
</table>

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Lecture 6  **Public Pensions and OPEBs** *(Feb 28, 2012)*

This lecture will focus upon evaluating public pension debt and OPEB liabilities and their impact upon municipal debt capacity. There will Guest Lecturer(s) for this credit segment. Credit sectors and topics to be covered include:

- Public Pension and OPEB Liabilities
- Key Accounting Measures and other Metrics
- Profile of Present Funding Crisis
- Financial Impact Upon Debt Capacity
- Road to Reform
### Readings:

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Analysts Guide to Financial Statements</td>
<td>GASB</td>
<td>Public Pension Plans</td>
</tr>
<tr>
<td>Truth in Numbers</td>
<td>State of Rhode Island</td>
<td>Gina M. Raimondo</td>
</tr>
<tr>
<td>2010 State Pension Funding Review</td>
<td>Loop Capital Markets</td>
<td>Author: Chris Mier</td>
</tr>
<tr>
<td>Benchmarking &amp; Measuring Debt Capacity</td>
<td>GFOA</td>
<td>Chapters 2 and 4</td>
</tr>
</tbody>
</table>

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**Lecture 7  Public Private Partnerships (Mar 6, 2012)**

The third lecture on credit quality will focus on issues and topics relating to the rise and use of Public Private Partnerships. There will be Guest Lecturer(s) for this credit segment. Topics to be covered include:

1. Overview of Public Private Partnerships
2. Examples of Public Private Partnerships
3. Theoretical Considerations for Public Administrators

### Readings:

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitch Criteria Report Cherian George</td>
<td></td>
<td>US Toll Road Privatizations: Seeking the Right Balance</td>
</tr>
<tr>
<td>Fitch Criteria Report Cherian George</td>
<td></td>
<td>Global Toll Road Rating Guidelines</td>
</tr>
<tr>
<td>Global Infrastructure Irene Walsh</td>
<td></td>
<td>Structuring Effective Public</td>
</tr>
</tbody>
</table>
This lecture will focus upon evaluating two historic development projects currently underway in New York City: (i) Hudson Rail Yards; and (ii) World Trade Center. Invited speaker(s) include public finance banker(s) instrumental in structuring these financings and the issuance and sale of underlying securities. Topics to be covered will include:

- Detailed Project Overview
- Developmental Issues and Objectives
- Innovative Structure and Security Pledge
- Credit Analysis of Underlying Projects

**Readings:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moody’s Report on Hudson Rail Yards</td>
<td>Nov 01, 2006</td>
</tr>
<tr>
<td>Moody’s Report on Hudson Rail Yards</td>
<td>Sep 29, 2011</td>
</tr>
<tr>
<td>S&amp;P Report on NYC Liberty Development Corp (4 WTC Project)</td>
<td>Dec 10, 2010</td>
</tr>
<tr>
<td>Hudson Yards Infrastructure Corporation Senior Revenue Bonds Official Statement</td>
<td>Oct 20, 2011</td>
</tr>
<tr>
<td>New York Liberty Development Corporation (1 WTC Project) Official Statement</td>
<td>Dec 01, 2011</td>
</tr>
</tbody>
</table>

* * *
Lecture 9  Portfolio Management  (March 27, 2012)

Instructor:  Joseph R. Arcieri

This lecture provides an in depth introduction to municipal portfolio management. It emphasizes the unique characteristics of municipal securities and their influence on portfolio management. This lecture will cover a range of topics including bond characteristics, bond pricing, risk measures, portfolio models and trading strategies.

Additional reference will be made to several websites. These include:

- Municipal Securities Rulemaking Board (www.msrb.org)
- SIFMA (www.investinginbonds.com)
- Standard & Poor’s Municipal Indices (www.kennyweb.com)
- Vanguard (www.vanguard.com)
- Investopedia (www.investopedia.com)
- SEC (www.sec.gov/investor/pubs/inwsmf.htm)
- FICALC (www.ficalc.com/calc.tips)

<table>
<thead>
<tr>
<th>Readings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Municipal Bonds</td>
</tr>
<tr>
<td>Investopedia - Tutorials</td>
</tr>
<tr>
<td>Investopedia - Tutorials</td>
</tr>
<tr>
<td>SEC – online publication</td>
</tr>
<tr>
<td>Standard &amp; Poor’s Municipal Indices</td>
</tr>
</tbody>
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Municipal Derivatives and Related Topics  (Lectures 10, 11, 12 and 13)

Instructor:  Jerrold H. Abrahams

The final segment of the course will focus on three topics that are especially relevant to challenges facing state and local governments and not-for-profit enterprises. Lectures 10 and Lecture 11 will provide an overview of the municipal derivatives market. Course lectures and readings will provide an in-depth survey of the non-traditional financial strategies available to tax-exempt issuers. Emphasis will be on historical uses and management of legacy financial positions. Lecture 12 will provide an overview of the financing of renewable energy projects in the tax-exempt sector. The discussion will also review challenges and subsidies
available under current law and governmental policy and the current financial challenges facing state and local governments with respect to renewable energy projects. **Lecture 13** will review recent cases of municipal distress with an analysis on the factors that contribute to turmoil.

Your grade for this course segment will be based upon completion of an assignment or exercise(s) which will account for 20% of your final grade.

There are two primary texts and others assigned readings for this segment of the course. These are:

- Derivatives in the Public Sector (Published by Citi)
- Understanding Swaps (Marshal and Kapner) Published by J. Wiley & Sons

* * *

**Lecture 10**  **An Overview of the Derivatives Market**  *(April 3, 2012)*

1. Types of Derivatives Instruments
   a. Definition of a Swap
   b. Why does such a thing exist
   c. How is it used
      1. Primary Market
      2. Secondary Market, investment side
      3. Other uses

2. Interest Rate Swaps

3. Other Types of Swaps
   a. Commodity
   b. Credit
   c. Currency

4. Common Municipal Derivative Structures
   a. BMA Swaps
   b. Libor Swaps
   c. Forwards and Rate Locks
   d. Carry Trades

5. Interest rate Derivative Transaction Structures
   a. Floating-vs-Fixed
      1. Synthetic fixed rate
      2. Description
3. Application – how it is used
4. Risks and benefits

b. Fixed-vs-Floating Swaps
   1. Synthetic floating – Carry trade
   2. Description
   3. Application – how it is used
   4. Risks and benefits

Readings:

| Fundamentals of Municipal Bonds | Judy Wesalo Temel | Ch. 4 
| Marshall/Kapner | Ch. 1, 2.1 to 2.3 | Ch. 10 |
| DIPS | Pgs. 1 to 36 |

* * *

Lecture 11  Derivatives in the Public Sector  (Apr. 10, 2012)

c. Basis Swaps
   1. Tax Risk
   2. Description
   3. Application – how it is used
   4. Risks and benefits

d. Swaptions
   1. Refundings – limitations of advance refunding, up-front money
   2. Description
   3. Application – how it is used
   4. Risks and benefits

e. Options, Caps and Floors
   1. Interest rate risk mitigation
   2. Description
   3. Application – how it is used
   4. Risks and benefits
Lecture 12  **Financing Green Energy Projects**  (Apr. 17, 2012)

Overview of economics of renewable energy projects
1. Economic challenges
2. Available federal subsidies
3. SREC market and state subsidies
4. Review of simplified financial model

* * *


This lecture will focus upon evaluating distressed credits using two contemporary bond defaults as case studies: (i) the City of Harrisburg, Pennsylvania; and (ii) Jefferson County, Alabama. The lecture will begin with a detailed overview of Chapter 9 of the US Bankruptcy Code then proceed to evaluate each individual credit. Topics to be covered will include:

- Credit analysis of the underlying obligor
- Unique factors responsible for default
- Range of remedial options for issuer and investors
- Lessons Learned

Readings:

<table>
<thead>
<tr>
<th>Readings</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moody’s Report on City of Harrisburg, Pa</td>
<td>Feb, 11, 2010</td>
</tr>
<tr>
<td>Moody’s Report on Harrisburg Authority</td>
<td>Jan. 18, 2011</td>
</tr>
<tr>
<td>Municipal Bankruptcy Under Chapter 9</td>
<td>Dubrow, 1992</td>
</tr>
</tbody>
</table>
Additional reference readings will be available on Blackboard. These will include relevant Official Statements for each issuer and notable consultant reports.

* * *

Lecture 14 Recap, Conclusion and Closing Remarks (May 1, 2012)

1. Summary of Credit Risk Analysis
   - Review of Key Analytical Criteria
   - Future trends and issues
   - Final thoughts and observations

2. Summary of Municipal Derivatives
   - Review of Key Derivatives Points
   - Future trends and issues
   - Final thoughts and observations

3. Discussion of Final Project

4. Career Paths in Municipal Finance