# PUBLIC ECONOMICS: ECONOMICS OF THE GOVERNMENT SECTOR: ECON 4211-001 <br> Department of Economics, University of Colorado 

Spring 2017

Classtime: M,W,F: 11 am - noon. Lecture Room: HLMS 211
Professor: Charles de Bartolome Office: ECON 203
Office hours: Mon 1:50-2:50 pm; Thurs 9:15-10:15 am e-mail: debartol@colorado.edu

Textbook: $\quad$ Harvey S. Rosen and Ted Gayer: Public Finance ( $9^{\text {th }}$ edition). McGraw-Hill Irwin.

Clickers The class uses $i>$ clickers. If you do not already own one, an $i>$ clicker may be purchased at the University of Colorado bookstore. Clickers will be used to give class problems which will be scored.

Clickers must be registered at: https://myCUinfo.colorado.edu .
Register using your Identity Login not your student ID.

## Course description:

The benchmark model of economics is that markets are "good" at producing and allocating most commodities. However, there are instances when markets do not work well. This is termed market failure, and the course will discuss two classic examples of market failures, viz. public goods and externalities. In such situations, a government program may be justified on the grounds that it can improve outcomes. In addition, markets do not always lead to equitable outcomes. In such situations, a government program may be justified if it redistributes resources from rich to poor families. The course discusses how the design of a program is determined by the legislators' objectives and by the extent to which voters are informed. In addition to discussing the justification and design of a government program, the course discusses the financing of the program and the design of the tax structure.

Pre-requisites:
Intermediate Microeconomics, ECON 3070;
Introduction to Statistics with Computer Applications, ECON 3818.

## Course Assignments and Desire2Learn:

All course assignments, problem sets and some lecture notes are posted on Desire2Learn which may be accessed at http://learn.colorado.edu .

Please note that six pages of each Adobe Acrobat file can be printed on a single sheet by clicking as: download $>\overline{\text { }}>$ downloads $>$ show in folder $>$ open highlighted file by clicking on it $>$ print $>$ landscape $>$ multiple $>2 \times 3$

## Attendance at class:

Woody Allen once remarked: " $90 \%$ of success is just turning up". The best way to learn the material is to attend class. Reading the lecture notes posted on the web is not a good substitute for attendance. Attendance at class is expected and required.

## Administrative Drop:

Because attendance is important and is expected, I will drop from the class any student who does not attend two of the first three classes of the term nor gets special permission from me for his/her absence.

Problem Sets:
Problem sets for each topic are listed in the Course Outline. The problems with answers at the back are posted for each topic. The problem sets are an integral part of the course. They are designed to help you use the material and a significant part of the exams will loosely follow their format.

In addition, there are many questions at the end of each chapter in the textbook. I encourage you to work through the questions which relate to the material covered in class (I will post a list of these questions on Desire2Learn).

Use of clickers:
Clickers will be used near the end of most classes to reinforce the main point of the lecture.

## Grading:

There will be a midterm exam, a paper and a final exam. The student's grade will be determined as:

41\% Midterm,
10\% Paper
41\% Final
8\%. In-class clicker questions

Concerning in-class clicker questions. Each correct answer will receive 1 point, and an absence or an incorrect answer will receive zero points. In calculating your total score for all in-class clicker questions, I will sum your scores for all days, omitting your three lowest daily scores.

## Paper timeliness:

It is important that the paper is handed in on the date due (to be announced). If the paper is not handed in by the date due, your maximum score for the paper will be lowered from 10 to 5 points. If the paper is not handed in by the day of the exam, your score for the paper will be 0 .

## Contributing to the group in the creation of the paper:

There have been instances in the past when a member of a group does not fully participate in the creation of the paper. If this happens, the members of the group who are participating should email me noting that the member of the group is not fully participating in the creation of the paper. I will then forward this email to the member asking for his/her comment. If he/she agrees that he/she is not fully participating, I will increase the scores of the participating members to reflect the fact that they are doing more work and reduce the score of the other member to reflect the level of his/her participation. If he/she disagrees and claims to be participating, I will summon all group members to my office to discuss.

## Exams:

Because this is an advanced course, there is only one midterm. The midterm and final will be given as:

| MIDTERM: | Monday 27 February <br> in TBA | $7: 00-9: 00 \mathrm{pm}$. |
| :--- | :--- | :--- |
| FINAL: | Sunday 7 May <br> in HLMS 211 | $7: 30-10: 00 \mathrm{pm}$. |

You must bring a blue-book to each exam.
Because this is a 4000-level class, the exams will not just repeat material covered in class. Some questions will follow the material covered in class and in the problem sets, but some will ask you to apply the material in a different environment

## Failure to be present at an exam:

If you are unable to take an exam because of illness and have a medical note from your doctor to confirm this, you may take a make-up. Otherwise, unless you have obtained my prior permission to take the make-up, failure to be present for an exam will cause your score to be 0 for that exam.

Using Clickers:
I consider it cheating if a student uses another student's clicker.
You get a green light when your answer is registered. If you get a red light, your clicker is not registering and your score is automatically zero.

## Classroom courtesy:

Please turn your cell 'phone off prior to the start of class.
I believe that learning is enhanced if there is full concentration by both the instructor and the student. To facilitate this, laptops may only be used in the front two rows of the classroom and usage of laptops in class is restricted to following the course notes.

Accommodations for students with special needs:
If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact:303-492-8671; Center for Community Building, Room N200; or http://disabilityservices.colorado.edu

If you have a temporary medical condition or injury, please see the guidelines at: http://disabilityservices.colorado.edu

Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations.

## Religious Observances:

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please let me know in a timely manner if one of the exam dates falls on a religious holiday you intend to observe and I will arrange for you to take a make-up. See policy details at:
http://www.colorado.edu/policies/fac relig.html

## Classroom Behavior:

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at http://www.colorado.edu/policies/student-classroom-and-course-related-behavior And at:
http://www.colorado.edu/studentaffairs/studentconduct/index.html

Academic Integrity:
All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu ; 303-7352273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and nonacademic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at: http://www.colorado.edu/policies/honor.html and at http://honorcode.colorado.edu

## Discrimination and Harassment Policy:

The University of Colorado at Boulder is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/08/2001). CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at (303) 4922127 or the Office of Student Conduct (OSC) at (303) 492-5550. Information
about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at http://hr.colorado.edu/dh/Pages/default.aspx

Course outline:
A list of topics to be covered and likely dates is shown on the next pages. This is an estimated plan. Topics may take more or less time than estimated in this plan.

## COURSE OUTLINE

| Date | $\underline{\text { Topic }}$ | Chapt |
| :---: | :---: | :---: |
| 1. INTRODUCTION |  |  |
| 16 Jan | INTRODUCTION | 1 |
|  | Fundamental Question of Public Economics |  |
|  | Micro v. Macro |  |
|  | Separation of expenditure and taxes |  |
| 18 Jan | Government size | 22 |
|  | FISCAL FEDERALISM |  |
|  | Assignment of responsibilities |  |
|  | Problem Set: Fiscal Federalism |  |
| 20 Jan | Normative $v$. positive |  |
|  | POSITIVE ECONOMICS | 2 |
|  | The need for a model |  |
| 23 Jan | NORMATIVE ECONOMICS: THE OBJECTIVE | 3 |
|  | Pareto-efficiency |  |
|  | Welfare functions |  |
|  | Need for a model |  |

## 2. BASE CASE: COMPETITIVE MARKETS

25, 27, 30 Jan PRIVATE GOODS 3 (cont)
Competitive outcome.
First fundamental welfare theorem.
Second fundamental welfare theorem.

Problem Set: First Fundamental Welfare Theorem
Problem Set: Public Provision of Private Goods
Problem Set: Second Fundamental Welfare Theorem

## 3. MARKET FAILURE: PUBLIC GOODS

$1,3,6,8,10,13$ Feb PUBLIC GOODS
Non-rivalness and non-excludability.
Efficient provision.
Free-rider problem.
Public vs. private provision.
Problem Set: Why the lights don't get turned off after class.
Problem Set: Non-excludable public good.
Problem Set: Excludable public good.

## 4. GOVERNMENT FAILURE: PUBLIC DECISION-MAKING

15, 17, 20, 22, 24 Feb

27 Feb

1, 3, 6 Mar

PUBLIC DECISION-MAKING
Normative: Benefit-cost analysis 8
Positive: 6
Informed voters: - majority voting - median voter theorem. - cycling.

Problem Set: Benefit-Cost Analysis.
Problem Set: Voting
Problem Set: Cycling.
Problem Set: More than two alternatives

REVIEW
MIDTERM (7:00-9:00 p.m. in )

PUBLIC DECISION-MAKING (cont)
Other methods of making public decisions
Arrow impossibility theorem.
Uninformed voters:

- the iron triangle.


## 5. MARKET FAILURE: EXTERNALITIES

8, 10, 13, 15, 17, EXTERNALITIES 5 22, 24 Mar Efficient behavior.

Coase theorem.
Pigou taxes and subsidies.
Regulation.
Problem Set: the Coase theorem.
Problem Set: Pigou tax.
Problem Set: Permit sales.
Problem Set: Regulation

## 6. INCOME REDISTRIBUTION

3, 5, 7, 10 Apr INCOME REDISTRIBUTION 12,13
Process or end-state criterion.
Equity and social welfare functions.
Utilitarianism.
Max-min and the original position.
A typical redistribution program
The shrinking pie.
The equity $v$. efficiency trade-off.
Public provision of private goods.
Problem Set: Okun's Bucket: Redistribution Program
Problem Set: Social welfare and income redistribution.

## 7. TAX ANALYSIS

| $11,13,17$ Apr | PUBLIC FINANCE: TAX OR DEFICIT FINANCING | 20 |
| :--- | :--- | :---: |
|  | Ricardo equivalence. |  |
|  | Keynes view. |  |
|  | Overlapping-generation model. |  |
|  | Traditional argument. |  |
|  | Crowding-out of capital. | 11 |

Problem Set: Tax or deficit financing. Problem Set: Bonds crowd out capital
Problem Set: Social security and savings.
Problem Set: Demographic issues

| $19,21,24,26$ Apr | TAXATION: PRODUCT AND INCOME TAXES | 15 |
| :--- | :--- | :---: |
|  | Do sales taxes reduce consumption |  |
|  | Do labor taxes reduce effort? |  |
|  | Do capital taxes reduce savings? |  |
|  | Excess Burdens |  |

Problem Set: Setting the product tax rate.
Problem Set: Product tax: excess burden.
problem Set: Product Tax: short-run and long-run
Problem Set: Setting the income tax rate.
Problem Set: Income tax - excess burden.
Problem Set: Okun's bucket: cost of redistributing income

28 Apr, 1, 3 May TAXATION: NORMATIVE RULES FOR SETTING TAX RATES
Tax rules
Tax reform
Problem Set: Tax Reform

5 May REVIEW
7 May $\quad$ FINAL EXAM (7:30 p.m. -10.00 p.m. in HLMS 211)

