

# PUBP720: Managerial Economics and Policy Analysis Fall 2020

7/27/2020

**course credit:** 3

**location:** Zoom (see below, page 10)

**meeting time:** Thursday 7:20-10:00PM

**1st Day:** August 27, 2020

**email (preferred contact):**

auerswald@gmu.edu

**office hours:** Thursday 2:30-3:30PM (Zoom meeting room: <https://bit.ly/Auerswald-zoom>) or by appointment

**tel:** 202-378-6438 (cell)

## Description of the Course

### LEARNING OBJECTIVES

This course is a workshop in using analytic techniques to answer difficult questions about human decision-making in a social context. Its purpose is to provide students with a sense of confidence in understanding

1. How individual decisions lead to aggregate (industry-, nation-, or global-scale) outcomes and *vice versa*, and
2. How public policies of various types affect both decisions and outcomes.

### AUDIENCE

PUBP720 is a core MPP course. It is also a “bridge course” into Ph.D. level microeconomics courses for students with little prior background in economic analysis, but who are, at minimum, comfortable with algebra.

**Note: This course will require you to develop basic literacy in the use of calculus. You are not required to have taken a calculus class before taking this course. However, you will be required to understand and to use calculus in this course.**

In advance of the course, you should understand the material covered in the GMU Schar School math tutorials

- Basic Math Refresher: <https://schar.gmu.edu/current-students/masters-student-services/masters-101/math-refresher>
- Math for Economics Tutorial: <https://schar.gmu.edu/current-students/masters-student-services/masters-101/math-for-economics>

### COURSE PLATFORM

**The course will be conducted synchronous/online via Zoom meeting, supplemented by readings and additional online resources listed below.**

**In general, the platforms for the course will be**

- **Email to your Masonlive account** (please check this regularly)
- **Google Suite tools** (Google Drive, Google Slides, Google Sheets, and so forth.)

- **Sli.do** (for surveys)
- **Microsoft Office Lens, or similar** (for using your phone to scan handwritten answers to problem sets and exams)
- **U.S. Postal Service** (backup to scan, for handwritten answers to problem sets and exams)

We will *not* use Blackboard.

Course materials are mostly available as links in the syllabus (below). Additional resources will be available to you in the class Google Drive folder.

### **STUDENT EXPERIENCE**

We will be using class (Zoom) meeting time in this course to do work together. Students **must** come to class every session prepared—which means, in particular, that you must have done the readings and viewed any required videos for that class session.

### **EXPECTATIONS**

The expectations in this class reflect those that exist in the workplace for policy analysts. Students are expected to be engaged contributors to every aspect of the work of the class. (this means **cameras on** during class time, please, unless an exceptional obstacle prevents that.) Students **must** create first-rate work of their own and must also contribute actively to collaborative efforts.

### **EVALUATION**

Students' grades in this course will be determined as a combination of

- Final exam: 50%
- Midterm: 30%
- Problem sets: 20% [to be described first week of class]

### **TEAMS**

**You can access the class survey at**

<https://www.surveymonkey.com/r/ZCWG375>

**Please fill out the class survey ASAP, if you have not already done so. The results of the survey provide me with guidance as I assign you to teams.**

### **COMMUNICATIONS**

**The best way to reach me is either by email (auerswald@gmu.edu) or cell phone (202-378-6438).** If you email a question to me that may require more than a yes/no answer (in particular, any questions regarding assignments), please include in the message a phone number at which you can be reached during the day.

### **COURSE MATERIALS**

I suggest you purchase:

Mehrsa Baradaran (2017), *The Color of Money: Black Banks and the Racial Wealth Gap*, Cambridge, MA: The Belknap Press of Harvard University Press [ISBN 13: 978-0674970953]

Nassim Nicholas Taleb (2010), *The Black Swan: The Impact of the Highly Improbable* (second edition). New York, NY: Random House [ISBN 13: 978-0812973815]

If you would like to track the material in the course in a textbook, I suggest you buy one of the two following editions of *Microeconomics* by Robert Pindyck and Daniel Rubinfeld:

Robert Pindyck and Daniel Rubinfeld, *Microeconomics* 9th edition, Prentice Hall. [ISBN 13 #: 978-0134184241] or

Robert Pindyck and Daniel Rubinfeld, *Microeconomics* 8th edition, Prentice Hall. [ISBN 13: 978-0132857123] or

If you can get either for roughly the same price, go for the 9<sup>th</sup> edition. **The material I present will parallel the material in this textbook. However, my course slides convey the core material for this class. The textbook is supplemental.**

**Note:** The Pindyck and Rubinfeld book costs (at minimum) \$50 less on Amazon than it does at the bookstore. If you use your gm.u.edu email address (and you haven't already used up your Amazon trial period) you will qualify for free Super Saver shipping:

<http://www.amazon.com/gp/student/signup/info>

**Because I have found this option is strongly preferable for students, and because the course is online, I have not ordered this textbook for the campus bookstore this semester.**

If you have not done so already, please familiarize yourself with the library's online resources (particularly JSTOR), and make sure that you have access to Adobe Acrobat Reader.

Finally, I recommend (but do not require) that you purchase.

Tim Harford, 2006. *The Undercover Economist: Exposing Why the Rich Are Rich, the Poor Are Poor--and Why You Can Never Buy a Decent Used Car!* New York: [ISBN-10: 0195189779]

Also worth reading, if you haven't already, are

Daniel Kahneman (2011), *Thinking, Fast and Slow*. New York, NY: Farrar, Straus and Giroux. [ISBN: 978-0374275631]

Levitt, Steven D. and Stephen J. Dubner, 2005. *Freakonomics: A Rogue Economist Explains the Hidden Side of Everything*, New York: William Morrow. [ISBN: 0-06-073132-X]

*The Undercover Economist* and *Freakonomics* both provide numerous examples of the creative use of economic analysis in answering policy questions. *Freakonomics* is the cleverest of these three; however *The Undercover Economist* more closely tracks the material in a graduate level microeconomics course. Purchase these books is not required.

## Professional Ethics

### HONOR CODE<sup>1</sup>

GMU shares in the tradition of an honor system that has existed in Virginia colleges since 1842. The Honor Code is an integral part of university life. Students are responsible for understanding the provisions of the code. In the spirit of the code, a student's word is a declaration of good faith acceptable as truth in all academic matters. Therefore, attempted cheating, plagiarism, lying, and stealing of academic work and related work constitute Honor Code violations. All work must be your own. Inappropriate use of the work of others without attribution is plagiarism and a George Mason University Honor Code violation punishable by expulsion from the University. All students should familiarize themselves with this honor code provision.

### POLICY ON PLAGIARISM

The profession of scholarship and the intellectual life of a university as well as the field of public policy inquiry depend fundamentally on a foundation of trust. Thus any act of plagiarism strikes at the heart of the meaning of the university and the purpose of the Schar School. It constitutes a serious breach of professional ethics and it is unacceptable.

Plagiarism is the use of another's words or ideas presented as one's own. It includes, among other things, the use of specific words, ideas, or frameworks that are the product of another's work. Honesty and thoroughness in citing sources is essential to professional accountability and personal responsibility. Appropriate citation is necessary so that arguments, evidence, and claims can be critically examined.

Plagiarism is wrong because of the injustice it does to the person whose ideas are stolen. But it is also wrong because it constitutes lying to one's professional colleagues. From a prudential perspective, it is shortsighted and self-defeating, and it can ruin a professional career.

The faculty of the Schar School takes plagiarism seriously and has adopted a zero tolerance policy. Any plagiarized assignment will receive an automatic grade of "F." This may lead to failure for the course, resulting in dismissal from the University. This dismissal will be noted on the student's transcript. For foreign students who are on a university-sponsored visa (eg. F-1, J-1 or J-2), dismissal also results in the revocation of their visa.

To help enforce the Schar School policy on plagiarism, all written work submitted in partial fulfillment of course or degree requirements must be available in electronic form so that it can be compared with electronic databases, as well as submitted to commercial services to which the School subscribes. Faculty may at any time submit student's work without prior permission from the student. Individual instructors may require that written work be submitted in electronic as well as printed form. The Schar School policy on plagiarism is supplementary to the George Mason University Honor Code; it is not intended to replace it or substitute for it.

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<sup>1</sup> Description thanks to Professor Steve Ruth.

## Course Outline

### PART I: THEORY OF THE CONSUMER

*Session 1: Overview of the course; consumer preferences, indifference curves (August 27)*

#### Assignments:

problem set #1 sent out (prior to the start of class)

#### Policy questions:

- Is microeconomics just market-friendly propaganda?
- Rent or buy?

#### Required readings

- Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics*, 1953; pp. 3-43 (Focus particularly on section V)  
<http://www.sfu.ca/~dandolfa/friedman-1966.pdf>
- Joseph Stiglitz, Nobel Prize Lecture, December 8, 2001  
<https://www.nobelprize.org/uploads/2018/06/stiglitz-lecture.pdf>
- Derek Thompson and Jordan Weissmann, "The Cheapest Generation," September, 2012  
<https://www.theatlantic.com/magazine/archive/2012/09/the-cheapest-generation/309060/>
- *New York Times*, "Rent or Buy, A Matter of Lifestyle," May 11, 2011  
<http://www.nytimes.com/2011/05/11/business/economy/11leonhardt.html>
- *New York Times*, "Is it Better to Buy or Rent?"  
<https://www.nytimes.com/2017/06/04/your-money/whether-to-rent-or-buy-a-home.html>

#### Required video\*

- MIT OpenCourseware, "Preferences and Utility"  
[https://www.youtube.com/watch?v=9kH0x7V\\_0Ig&index=4&list=PL61533C166E8B0028](https://www.youtube.com/watch?v=9kH0x7V_0Ig&index=4&list=PL61533C166E8B0028)

#### Required Tutorials (Please make sure you are very comfortable with all the material presented in these two tutorials)\*

- Basic Math Refresher: <https://schar.gmu.edu/current-students/masters-student-services/masters-101/math-refresher>
- Math for Economics Tutorial: <https://schar.gmu.edu/current-students/masters-student-services/masters-101/math-for-economics>

#### Recommended Video

- Russ Roberts, Keynote Address, Mercatus Holiday Dinner, December 7, 2011  
<http://mercatus.org/podcast/2011/12/07/russ-roberts-delivers-keynote-address-mercatus-center-holiday-dinner>

*Session 2. Math Camp; Utility Functions (September 3)*

#### Policy question: Is happiness measurable?

P&R: Chapters 1-3

#### Required readings

- Hicks (1933, chapter 1) [see bibliography below]
- Joseph Stiglitz, Amartya Sen, and Jean-Paul Fitoussi, *Report of the Commission on the Measurement of Economic Performance and Social Progress*, Paris: Commission on the Measurement of Economic Performance and Social Progress, 2009. (pages 39-51)

<https://www.ofce.sciences-po.fr/pdf/dtravail/WP2009-33.pdf>

### Required videos\*

- MIT OpenCourseware, “**Budget Constraints**”  
<https://www.youtube.com/watch?v=TIWE0DaOlzU&list=PL61533C166E8B0028&index=5>
- An Entire Semester of Microeconomic Principles in One Hour (**23:11 to 38:32 only**)  
<https://www.youtube.com/watch?v=eDpyMJbxUMw>

*Session 3. Utility maximization; Income and substitution effects* (September 10)

### Policy question: Will the pandemic put an end to the population explosion?

P&R: Chapter 4 (including appendix)

### Required readings

- Thomas Malthus, *An Essay on the Principle of Population* (**Chapters I and II**)  
<https://www.econlib.org/library/Malthus/malPop.html>
- Dasgupta (1995) [see bibliography below]
- *The Economist*, “A Tale of Three Islands,” October 22, 2011  
<http://www.economist.com/node/21533364>
- Gretchen Livingston, “Is U.S. fertility at an all-time low? Two of three measures point to yes,” Pew Research Center, May 22, 2019 <https://www.pewresearch.org/fact-tank/2019/05/22/u-s-fertility-rate-explained/>

### Required video\*

- MIT OpenCourseware, “**Deriving Demand Curves**”  
[https://www.youtube.com/watch?v=yCd\\_OSJmtfg&list=PL61533C166E8B0028&index=6](https://www.youtube.com/watch?v=yCd_OSJmtfg&list=PL61533C166E8B0028&index=6)
- Hans Rosling, 200 Countries, 200 Years, 4 Minutes  
<http://youtu.be/jbkSRLYSojo>

*Session 4. Review of problem set #1; Income and substitution effects, continued* (September 17)

### Assignments:

[problem set #1 due](#)

[problem set #2 sent out](#)

### Policy question: Will the pandemic end the population explosion? (continued)

P&R: Chapter 4 (including appendix) [cont’d]

*Session 5. Property Rights, Contracting and Bargaining; Production and the Theory of the Firm* (September 24)

### Policy question: Is “software eating the world”?

P&R: Chapters 6 and 18

### Required readings

- Coase (1960), Chandler (1992), Barzel and Kochin (1992) [see references below]
- *Los Angeles Times*, “Guns, religion and climate change intensify Nigeria’s deadly farmer-herder clashes,” February 21, 2019  
<https://www.latimes.com/world/africa/la-fg-nigeria-farmer-herder-violence-20190221-story.html>
- Marc Andreessen, “Why Software Is Eating the World,” *The Wall Street Journal*, August 20, 2011  
<https://a16z.com/2011/08/20/why-software-is-eating-the-world/>
- Robert Gordon, “Why Innovation Won’t Save Us,” *The Wall Street Journal*, December 21, 2012. [access via library.gmu.edu]  
<http://online.wsj.com/article/SB10001424127887324461604578191781756437940.html>

**Required Video\***

- Marginal Revolution University, Principles of Microeconomics, “**The Coase Theorem**”  
<https://mru.org/courses/principles-economics-microeconomics/coase-theorem-example>
- Marginal Revolution University, Principles of Microeconomics, “**Costs and Profit Maximization Under Competition**” [all videos]  
<https://mru.org/courses/principles-economics-microeconomics/competitive-firm-definition>
- MIT OpenCourseware, “**Introduction to Producer Theory**”  
<https://www.youtube.com/watch?v=A6FOBdtbcz4&index=9&list=PL61533C166E8B0028>
- Erik Brynjolfsson, “In a race with machines, can we keep up?”  
<http://www.npr.org/2017/04/21/524700928/erik-brynjolfsson-in-a-race-with-machines-can-we-keep-up>

*Session 6: Review of problem set #2; Production, costs, and profits (October 1)*

**Assignments:**

problem set #2 due

**Policy question: Why did the Soviet Union collapse?**

P&R: Chapter 7

**Required reading**

- Argote and Epple (1990)

**Required Video\***

- MIT OpenCourseware, “**Productivity and Costs**”  
<https://www.youtube.com/watch?v=Q4iKuKAjzK0&list=PL61533C166E8B0028&index=10>

*Session 7. Midterm Exam (October 8) OPEN BOOK, OPEN NOTES*

**I WILL SEND THE MIDTERM EXAM TO YOU BY 6PM ON MONDAY, OCTOBER 5. IT WILL BE DUE BY EMAIL, FAX (202-330-5478), OR USPS NO LATER THAN 9PM ON MONDAY, OCTOBER 12.**

**WE WILL NOT HAVE A CLASS ZOOM SESSION THIS DAY**

*Session 8. Review of midterm; Production, costs, and profits (continued); Industry Evolution (October 15)*

**Policy question: Why do industries boom and bust?**

**Required readings**

- James Haltiwanger, “Job Creation and Firm Dynamics in the US,” March 2011  
[http://users.nber.org/~confer/2011/IPes11/Haltiwanger\\_NBER\\_2011\\_March25.pdf](http://users.nber.org/~confer/2011/IPes11/Haltiwanger_NBER_2011_March25.pdf)
- Julie Shier, “The Golden Era of D.C. Dining, Or An Age Of Terror?” July 6, 2012  
[http://wamu.org/programs/metro\\_connection/12/07/06/the\\_golden\\_era\\_of\\_dc\\_dining\\_or\\_an\\_age\\_of\\_terror](http://wamu.org/programs/metro_connection/12/07/06/the_golden_era_of_dc_dining_or_an_age_of_terror)
- Quartz “Restaurant and bars account for more than half of the US jobs lost in March,” April 4, 2020  
<https://qz.com/1832789/bars-and-restaurants-account-for-60-percent-of-all-us-jobs-lost-in-march/>

*Session 9. Efficiency and the analysis of competitive markets (October 22)*

**Policy question: Will the pandemic be the end of big cities?**

P&R: Chapters 2 (again) and 8, 9 and 16

**Required readings**

- Henry George, *Progress and Poverty* (**Book 5**)  
[https://cdn.mises.org/Progress%20and%20Poverty\\_3.pdf](https://cdn.mises.org/Progress%20and%20Poverty_3.pdf)

- *New York Times*, “The Virus Turns Midtown into a Ghost Town, Causing an Economic Crisis,” July 26, 2020  
<https://www.nytimes.com/2020/07/26/nyregion/nyc-coronavirus-time-life-building.html>
- *New York Times*, “Coronavirus Threatens the Luster of Superstar Cities,” July 26, 2020  
<https://www.nytimes.com/2020/07/21/business/economy/coronavirus-cities.html>

### PART III. MARKET FAILURE

*Session 10. Monopoly* (October 29)

**Policy question: Where does economic inequality come from?**

P&R: Chapters 5, 13, 17 and 18

**Required Video\***

- Marginal Revolution University, Principles of Microeconomics, “**Monopoly**” [all videos]  
<https://mru.org/courses/principles-economics-microeconomics/monopoly-profit-maximization-price-aids-medication>

**Required readings**

- Baradaran (2017) (**chapters 7 and 8**)
- Philip Auerswald and Joon Yun, “As Population Growth Slows, Populism Surges”  
<https://www.nytimes.com/2018/05/22/opinion/populist-populism-fertility-rates.html>
- *The Economist*, “Across the West powerful firms are becoming even more powerful,” November 15, 2018  
<https://www.economist.com/special-report/2018/11/15/across-the-west-powerful-firms-are-becoming-even-more-powerful>
- *The Economist*, “Dynamism has declined across Western economies,” November 15, 2018  
<https://www.economist.com/special-report/2018/11/15/dynamism-has-declined-across-western-economies>

**Required Audio**

- This American Life, “Status Update,” November 27, 2015 (**Act III**)  
<https://www.thisamericanlife.org/573/status-update>

**Optional Reading**

- Pro Publica, “The Color of Debt: How Collection Suits Squeeze Black Neighborhoods,” October 8, 2015  
<https://www.propublica.org/article/debt-collection-lawsuits-squeeze-black-neighborhoods>

*Session 11. Monopoly (continued); Intrinsic uncertainty* (November 5)

**Assignments:**

[problem set #3/4 sent out](#)

**Policy question: Where does economic inequality come from? (continued)**

- Michael Lind, “Why the Rich Get Richer,” *New York Times*, September 24, 1995  
<https://www.nytimes.com/1995/09/24/books/why-the-rich-get-richer.html>
- Charles I. Jones and Jihee Kim, “A Schumpeterian Model of Top Income Inequality,” NBER Working Paper 20637, October 2014. (**pages 1-11**)  
<https://www.nber.org/papers/w20637.pdf>
- W. Brian Arthur, “Positive Feedbacks in the Economy,” *Scientific American*, Vol. 262, No. 2 (February 1990), pp. 92-99.  
[http://tuvalu.santafe.edu/~wbarthur/Papers/SciAm\\_Article.pdf](http://tuvalu.santafe.edu/~wbarthur/Papers/SciAm_Article.pdf)



*Session 12. Intrinsic uncertainty; Externalities, public goods; regulation* (November 12)

**Policy question: Are standard tools of policy analysis obsolete?**

**Required Readings**

- Taleb (2010), Prologue and Chapters 14-17.
- Alexander F. Siegenfeld and Yaneer Bar-Yam (2019), “An Introduction to Complex Systems Science and its Applications”  
<https://necsi.edu/an-introduction-to-complex-systems-science-and-its-applications>

*Session 13. Externalities, public goods; regulation (continued); Q&A Session* (November 19)

**Policy question: Remember “rush hour”?**

**Required Video\***

- Marginal Revolution University, Principles of Microeconomics, “**Trading Pollution**”  
<https://mru.org/courses/principles-economics-microeconomics/clean-air-act-pollution-control>
- Marginal Revolution University, Principles of Microeconomics, “**Public Goods and the Tragedy of the Commons**” [all videos]  
<https://mru.org/courses/principles-economics-microeconomics/competitive-firm-definition>
- Marginal Revolution University, Principles of Microeconomics, “**Asymmetric Information**” [all videos]  
<https://mru.org/courses/principles-economics-microeconomics/adverse-selection-asymmetric-information-definition>

**Required Readings**

- Elinor Ostrom (2009), *Nobel Prize Lecture*  
<https://www.nobelprize.org/prizes/economic-sciences/2009/ostrom/lecture/>
- C. Gorney, “The Urge to Merge.” *New York Times*, August 3, 2008.  
<http://www.nytimes.com/2008/08/03/magazine/03traffic-t.html>
- A. Bernaset, “Placing Odds on Your Health (and Its Cost),” *New York Times*, December 28, 2013  
<http://www.nytimes.com/2013/12/29/business/placing-odds-on-your-health-and-its-cost.html>
- C. Conover, “Young People Under Obamacare: Cash Cow for Older Workers,” *Forbes*, November 27, 2012  
<http://www.forbes.com/sites/chrisconover/2012/11/27/young-people-under-obamacare-cash-cow-for-older-workers/>

*Session 14. Review of problem set 3/4; Efficiency and social welfare; Review of the Course* (December 3)

**Assignments:**

[problem set #3/4 due](#)

**Policy question: Should we export nuclear waste to poor countries?**

Readings: Sen (1999)

P&R: Chapters 5, 13, 17 and 18 [cont’d]

**FINAL EXAM—2.5 HOURS, CUMULATIVE, OPEN BOOK, OPEN NOTES**

**I WILL SEND THE FINAL EXAM TO YOU BY 6PM ON MONDAY, NOVEMBER 30. IT WILL BE DUE BY EMAIL, FAX (202-330-5478), OR USPS NO LATER THAN 9PM ON MONDAY, DECEMBER 7.**

## References

- L. Argote and D. Epple. Learning curves in manufacturing. *Science*, 247:920-924, 1990. [JSTOR]
- Y. Barzel and L. Kochin, 1992. "Ronald Coase on the Nature of Social Cost as a Key to the Problem of the Firm," *Scandinavian Journal of Economics*, 94:19-31. [JSTOR]
- A. D. Chandler, 1992. "Organizational Capabilities and the Economic History of the Industrial Enterprise." *Journal of Economic Perspectives*, 6(3): 79-100, Summer 1992. [JSTOR]
- R. Coase. "The problem of social cost." *Journal of Law and Economics*, 3:1-44, 1960. [JSTOR]
- P. Dasgupta. "The population problem: Theory and evidence." *Journal of Economic Literature*, XXXIII:1879-1902, December 1995. [JSTOR]
- J.R. Hicks, *Value and Capital*, Oxford University Press, 1933. [will email PDF and post it to Google Drive]
- A. Sen. "The Possibility of Social Choice." *American Economic Review*, 89(3): 349-378, June 1999. [JSTOR]

## ANNEX 1: Class Zoom Info

Join Zoom Meeting

Topic: PUBP720: Managerial Economics

<https://gmu.zoom.us/j/95111831018?pwd=cHR2MnR3YzltSDJiYTIEZGJwVHITZz09>

Meeting ID: 951 1183 1018

Passcode: 191676

One tap mobile

+12678310333,,95111831018#,,,,,0#,,191676# US (Philadelphia)

+13017158592,,95111831018#,,,,,0#,,191676# US (Germantown)

Time: Aug 27, 2020 07:00 PM Eastern Time (US and Canada)

Every week on Thu, 14 occurrence(s)

Please download and import the following iCalendar (.ics) files to your calendar system.

Weekly: [https://gmu.zoom.us/meeting/tJEsduigrToqG9yhfSgiZY-](https://gmu.zoom.us/meeting/tJEsduigrToqG9yhfSgiZY-7gt3mycMDiwRe/ics?icsToken=98tyKuCtrzorEteUsBiPRowMBYj4d_zztn5fjfpElBnWBClpW06hMfYRP6t8PfzZ)

[7gt3mycMDiwRe/ics?icsToken=98tyKuCtrzorEteUsBiPRowMBYj4d\\_zztn5fjfpElBnWBClpW06hMfYRP6t8PfzZ](https://gmu.zoom.us/meeting/tJEsduigrToqG9yhfSgiZY-7gt3mycMDiwRe/ics?icsToken=98tyKuCtrzorEteUsBiPRowMBYj4d_zztn5fjfpElBnWBClpW06hMfYRP6t8PfzZ)

Dial by your location

+1 267 831 0333 US (Philadelphia)

+1 301 715 8592 US (Germantown)

Meeting ID: 951 1183 1018

Passcode: 191676

Find your local number: <https://gmu.zoom.us/u/aco9GXVJe>

Join by SIP

95111831018@zoomcrc.co