

**THE UNIVERSITY OF HONG KONG  
FACULTY OF BUSINESS AND ECONOMICS**

**PhD Course Syllabus**

**Course Code/Title:** ECON6801 Applied Econometrics

**Course Description:** The goal of this course is for graduate students to learn a set of statistical tools and research designs that are useful in conducting high-quality empirical research on topics in applied microeconomics and related fields. Since most applied economic research examines questions with direct policy implications, this course will focus on methods for estimating causal effects. This course differs from many other econometrics courses in that it is oriented towards applied practitioners rather than future econometricians. It therefore emphasizes research design (relative to statistical technique) and applications (relative to theoretical proofs).

**Course Objectives:**

1. To provide students with a comprehensive understanding of different methods in casual inference and their applications to real-world policy problems.
2. To teach key research designs in applied microeconomics and help the students apply these designs in their independent studies.
3. To develop essential skills to read high-quality empirical papers in leading economics journals.
4. To foster creativity in research design an critical thinking in assessing empirical research

**Pre-requisite:** Students should be familiar with basic probability and statistics, matrix algebra, and the classical linear regression model.

**Assessment:** Participation/Presentation 30%; Problem Sets 40%; Proposal 40%

**Remarks:** All PhD courses are non-credit-bearing and will be assessed on a pass/fail basis.

Course Learning Outcomes (CLOs) On completion of this course, students should be able to:	Aligned PLOs*				
	1	2	3	4	5
1. Understand the econometric models in casual inference and different research designs in applied microeconomics.	√	√			
2. Be able to read high quality empirical papers published in leading economics journals and critically evaluate these studies	√		√	√	
3. Apply the statistical skills to analyze policy-relevant questions.	√	√	√	√	
4. Demonstrate effective written and verbal communication and teamwork skills through class participation and coursework.			√		√

**\*Programme Learning Outcomes (PLOs) for Research Postgraduate Programme:**

1. Demonstrate critical understanding, at an advanced level, of up-to-date knowledge and research methodology of a particular field
2. Implement effective academic and personal strategies for carrying out research projects independently and ethically

3. Contribute original knowledge in response to issues in their specialist area
4. Communicate research findings at a diverse range of levels and through a variety of media
5. Evaluate one's own research in relation to important and latest issues in the field

## COURSE DETAILS *(subject to change at instructor's discretion)*

**Year/Semester:** 2024 Spring

**Time/Venue:** Tuesday, 13:30 - 16:30, KK1121

**Instructor:** **Dr. Guojun He**  
 Email: [gjhe@hku.hk](mailto:gjhe@hku.hk)  
 Office: KKL-903 (by appointment)

**Statistical Software:** Demonstrations during lectures will be conducted in Stata or R. In the long run, if you are doing applied micro-econometrics, you will almost surely end up using one of these two packages.

## I. Teaching and Learning Activities

In-class and Out-of-class Activities <i>(e.g. lectures, class discussion, papers reading, proposal writing)</i>	Expected hour	% of student study effort
1. Interactive Lectures with Class Participation/Presentation.	36	27%
2. Assignments	30	23%
3. Proposal Writing and Data Analysis	30	23%
4. Self-Study (Readings)	36	27%
Total	132	100%

## II. Assessment

Assessment Components <i>(e.g. assignments, proposal, presentation, examination)</i>	Weight	CLOs to be assessed			
		1	2	3	4
1. Class Participation/Presentation	20%	√	√	√	√
2. Problem sets	30%	√	√	√	√
3. Referee Report	20%	√	√	√	√
4. Research Proposal (with Preliminary Results)	30%	√	√	√	√
Total	100%				

We will assign 4 to 5 problem sets during the course of the semester. You should work cooperatively on the problem sets in groups of up to 3. Late problem sets will incur a penalty of -10% per day late. The last problem set must be submitted on-time; it will not be accepted if late.

**Students will be assessed based on the following performance standards:**

Course Grade	Performance Standard
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Pass	Strong evidence of ability to fulfil the intended learning outcomes of the course at all levels of learning.
Fail	Little evidence of basic fulfilment of the intended learning outcomes of the course.

### III. Course Content and Tentative Schedule

#### I. Introduction

- A. Ordinary Least Squares and Agnostic Regression
- B. Introduction to Causality and Research Design
- C. Cautionary Notes

#### II. Selection on Observable Designs

- A. Regression Adjustment and Nonparametric Regression
- B. The Propensity Score and Dimensionality Reduction

#### III. Selection on Unobservable Designs

- A. Linear Panel Data Models
  1. Fixed Effects Models and Differences-in-Differences
  2. Case Studies with Synthetic Controls
- B. Instrumental Variables Models
  1. The IV Estimator
  2. Heterogeneous Treatment Effects
  3. 2SLS and Weak Instruments
- C. Regression Discontinuity Designs

#### IV. The Problem of Statistical Inference

- A. Panel Data and Clustering
- B. Randomization Inference
- C. Resampling
- D. Multiplicity Adjustment

### IV. Required/Recommended Readings

The course is not based on any one text. The contents are drawn heavily from lectures notes by Guido Imbens (Stanford), Joshua Angrist (MIT), and Michael Anderson (Berkeley). The course will also make reference to the textbooks listed below. Please purchase *Microeconometrics: Methods and Applications* and *Mostly Harmless Econometrics*. These two books will likely be your best companions for your future research.

- [CT] Cameron, A. Colin and Pravin Trivedi (2005). *Microeconometrics: Methods and Applications*. Cambridge University Press.
- [AP] Angrist, Joshua and Jorn-Steffen Pischke (2009). *Mostly Harmless Econometrics*. Princeton University Press.
- [JW] Wooldridge, Jeffrey (2002). *Econometric Analysis of Cross Section and Panel Data*. MIT Press.
- [WNE] Imbens, Guido and Jeffrey Wooldridge (2007). *What's New In Econometrics*, NBER Summer Course.
- [CT-Stata] Cameron, A. Colin and Pravin Trivedi (2010). *Microeconometrics Using Stata*. Stata Press.

## V. Introduction

### A. Ordinary Least Squares and Agnostic Regression

*CT* Chapters 4.1 - 4.5.

*JW* Chapter 2.

*AP* Chapter 3.1

\*Geiser, Saul and Maria Veronica Santelices. "Validity Of High-School Grades In Predicting Student Success Beyond The Freshman Year: High-School Record vs. Standardized Tests as Indicators of Four-Year College Outcomes." *Center for Studies in Higher Education Research and Occasional Paper Series CSHE.6.07*, 2007.

Hertenstein, Matt, Carrie Hansel, Alissa Butts, and Sarah Hile. "Smile Intensity in Photographs Predicts Divorce Later in Life." *Motivation and Emotion*, 2009, 33, 99–105.

Mullainathan, Sendhil and Jann Spiess. "Machine Learning: An Applied Econometric Approach." *Journal of Economic Perspectives*, 2017, 31, 87–106.

Lu, Yan, and Melvyn Teo. "Do Alpha Males Deliver Alpha? Testosterone and Hedge Funds." Working paper, 2018.

### B. Introduction to Causality and Research Design

*CT* Chapter 2.

*AP* Chapters 1 - 2.

*WNE* Lecture 1, Section 2.

\*Holland, Paul "Statistics and Causal Inference." *Journal of the American Statistical Association*, 1986, 81, 945–960.

\*Rubin, Donald "Statistics and Causal Inference: Comment: Which Ifs Have Causal Answers?" *Journal of the American Statistical Association*, 1986, 81, 961– 962.

\*Abadie, Alberto and Matias D. Cattaneo. "Econometric Methods for Program Evaluation." *Annual Review of Economics*, 2018, 10(1):465-503.

\*Duflo, Esther, Rachel Glennerster, and Michael Kremer. "Using Randomization in Development Economics Research: A Toolkit." *Handbook of Development Economics*, 2007: 3895-3962.

Willer, Robb, Christabel Rogalin, Bridget Conlon, and Michael Wojnowicz. "Overdoing Gender: A Test of the Masculine Overcompensation Thesis." *American Journal of Sociology*, 2013, 118(4), 980–1022.

Banerjee A, Duflo E, Glennerster R, Kinnan C. “The miracle of microfinance? Evidence from a randomized evaluation.” *American Economic Journal: Applied Economics*. 2015 Jan;7(1):22-53.

Miguel E, Kremer M. “Worms: identifying impacts on education and health in the presence of treatment externalities.” *Econometrica*. 2004 Jan;72(1):159-217.

Olken, Benjamin A. “Monitoring Corruption: Evidence from a Field Experiment in Indonesia.” *Journal of Political Economy*. 2007 Apr;115(2):200-49.

Thornton, Rebecca L. “The Demand for, and Impact of, Learning HIV Status.” *American Economic Review* 98, no. 5 (2008): 1829-63.

Ludwig, Jens, Greg J. Duncan, and Paul Hirschfield. “Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment.” *The Quarterly Journal of Economics*, 2001, 116, no. 2: 655-679.

Chattopadhyay, Raghavendra, and Esther Duflo. “Women as policy makers: Evidence from a randomized policy experiment in India.” *Econometrica*, 2004, 72, no. 5 (2004): 1409-1443.

de Janvry, Alain, Guojun He, Elisabeth Sadoulet, Shaoda Wang, and Qiong Zhan. “Performance Evaluation, Influence Activities, and Bureaucratic Work Behavior: Evidence from China.” Working Paper, 2019.

Buntaine, Mark, Michael Greenstone, Guojun He, Mengdi Liu, Shaoda Wang, and Bing Zhang. “Does Public Participation Matter? Evidence from a National-Scale Experiment on the Enforcement of Environmental Regulations in China.” Working Paper, 2021.

### C. Cautionary Notes

\*Lalonde, Robert. “Evaluating Econometric Evaluations of Training Programs with Experimental Data.” *American Economic Review*, 1986, 76, 604–620.

\*Freedman, David. “Statistical Models and Shoe Leather.” *Sociological Methodology*, 1991, 21, 291–313.

Scheiber, Noam. “Freaks and Geeks: How Freakonomics is Ruining the Dismal Science.” *The New Republic*, 2007, April 2, 27–31.

## VI. Selection on Observable Designs

### A. Regression Adjustment and Nonparametric Regression

CT Chapters 4.1 - 4.5.

AP Chapter 3.2.

WNE [Lecture 1, Section 3.1.](#)

JW Chapters 4, 18.3.1.

\*Krueger, Alan. "[How Computers Have Changed the Wage Structure: Evidence from Micro Data.](#)" *Quarterly Journal of Economics*, 1993, 108, 33–60.

\*DiNardo, John and Jorn-Steffen Pischke. "[The Returns to Computer Use Revisited: Have Pencils Changed the Wage Structure Too?](#)" *Quarterly Journal of Economics*, 1997, 112, 291–303.

Yule, G. Udny. "[An Investigation into the Causes of Changes in Pauperism in England, Chiefly During the Last Two Intercensal Decades \(Part I\).](#)" *Journal of the Royal Statistical Society*, 1899, 62, 249–295.

Altonji, Joseph, Todd Elder, and Christopher Taber. "[Selection on Observed and Unobserved Variables: Assessing the Effectiveness of Catholic Schools.](#)" *Journal of Political Economy*, 2005, 113, 151–184.

Belloni, Alexandre, Victor Chernozhukov, and Christian Hansen. "[High-Dimensional Methods and Inference on Structural and Treatment Effects.](#)" *Journal of Economic Perspectives*, 2014, 28, 29–50.

CT Chapter 9.

Blundell, Richard and Alan Duncan. "[Kernel Regression in Empirical Microeconomics.](#)" *The Journal of Human Resources*, 1998, 33, 62–87.

Cleveland, William. "[Robust Locally Weighted Regression and Smoothing Scatterplots.](#)" *Journal of the American Statistical Association*, 1979, 74, 829–836.

## B. The Propensity Score and Dimensionality Reduction

CT Chapter 25.4.

AP Chapter 3.3.

WNE [Lecture 1, Sections 3.2 - 3.4 and 5 - 7.](#)

JW Chapter 18.3.2.

\*Dehejia, Rajeev and Sadek Wahba. "[Causal Effects in Non-Experimental Studies: Reevaluating the Evaluation of Training Programs.](#)" *Journal of the American Statistical Association*, 94, 1999, 1053–1062.

\*Shadish, William, M. H. Clark, and Peter Steiner. "[Can Nonrandomized Experiments Yield Accurate Answers? A Randomized Experiment Comparing Random and Nonrandom Assignments.](#)" *Journal of the American Statistical Association*

*Association*, 2008, 103, 1334–1356.

\*Imbens, Guido. “Matching methods in practice: Three examples.” *Journal of Human Resources*, 2015, 50, 373–419.

Rosenbaum, Paul and Donald Rubin. “Reducing Bias in Observational Studies Using Subclassification on the Propensity Score.” *Journal of the American Statistical Association*, 1984, 79, 516–524.

Arceneaux, Kevin, Alan Gerber, and Donald Green. “Comparing Experimental and Matching Methods Using a Large-Scale Voter Mobilization Experiment.” *Political Analysis*, 2006, 14, 37–62.

Griffen, Andrew and Petra Todd. “Assessing the Performance of Nonexperimental Estimators for Evaluating Head Start.” *Journal of Labor Economics*, 2017, 35, S7–S63.

Dale, Stacy and Alan Krueger. “Estimating the payoff to attending a more selective college: An application of selection on observables and unobservables.” *Quarterly Journal of Economics*, 2002, 117, 1491–1527.

Anderson, Michael. “The Benefits of College Athletic Success: An Application of the Propensity Score Design.” *Review of Economics and Statistics*, 2017, 99, 119–134.

Millimet, Daniel and Rusty Tchernis. “On the Specification of Propensity Scores, With Applications to the Analysis of Trade Policies.” *Journal of Business and Economic Statistics*, 2009, 27, 397–415.

## **VII. Selection on Unobservable Designs**

### **A. Linear Panel Data Models**

#### **1. Fixed Effects Models and Differences-in-Differences**

*CT* Chapters 21 and 22.

*AP* Chapter 5.1 - 5.2.

*WNE* Lecture 10.

*JW* Chapter 10.

\*Currie, Janet and Duncan Thomas. “Does Head Start Make a Difference?” *American Economic Review*, 1995, 85, 341–364.

\*Ashenfelter, Orley, and Michael Greenstone. “Using Mandated Speed Limits to Measure the Value of a Statistical Life.” *Journal of Political Economy*, 2004, 112(1), S226–67.

Deschênes, Olivier and Michael Greenstone. “The Economic Impacts

of Climate Change: Evidence from Agricultural Output and Random Fluctuations in Weather.” *American Economic Review*, 2007, 97, 354–385.

Griliches, Zvi and Jerry Hausman. “Errors in Variables in Panel Data.” *Journal of Econometrics*, 1986, 31, 93–118.

Esther, Duflo. “Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment.” *American Economic Review*, 2001.

Qian, Nancy. “Missing women and the price of tea in China: The effect of sex-specific earnings on sex imbalance.” *The Quarterly Journal of Economics*, 2008, 123(3):1251-1285.

Nunn, Nathan and Nancy Qian. “The potato’s contribution to population and urbanization: evidence from a historical experiment.” *The Quarterly Journal of Economics*, 2011, 126(2):593-650.

Chen, Yi, Ziyang Fan, Xiaomin Gu, Li-An Zhou. “Arrival of Young Talent: The Send-Down Movement and Rural Education in China.” *American Economic Review*, 2020, 110(11): 3393-3430.

Jia, Ruixue. “The Legacies of Forced Freedom: China’s Treaty Ports.” *Review of Economics and Statistics*, 2014, 96(4):596-608.

He, Guojun and Shaoda Wang. “Do College Graduates Serving as Village Officials Help Rural China?” *American Economic Journal: Applied Economics*, 2017, 9(4), pp 186-215.

He, Guojun, Yang Xie, and Bing Zhang. “Expressways, GDP, and the Environment: The Case of China.” *Journal of Development Economics*, 2020, 145: 102485.

## 2. Case Studies with Synthetic Controls

CT Chapter 25.5.

\*Card, David and Alan Krueger. “Minimum Wages and Employment: A Case Study of the Fast-food Industry in New Jersey and Pennsylvania.” *American Economic Review*, 1994, 84, 487–496.

\*Abadie, Alberto and Gardeazabal J. “The Economic Costs of Conflict: A Case Study of the Basque Country.” *American Economic Review*, 2003, 93(1):113-132.

\*Abadie, Alberto, Alexis Diamond and Jens Hainmueller. “Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California’s Tobacco Control Program.” *Journal of the American Statistical Association*, 2010, 105, 493–505.



Card, David. “The Impact of the Mariel Boatlift on the Miami Labor Market.” *Industrial and Labor Relations Review*, 1990, 43, 245–257.

## B. Instrumental Variables Models

### 1. The IV Estimator

*CT* Chapter 4.8.

*AP* Chapter 4.1 - 4.3.

*JW* Chapter 5.

\*Angrist, Joshua. “Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records.” *American Economic Review*, 1990, 80, 313–336.

\*Angrist, Joshua and Alan Krueger, “Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments.” *Journal of Economic Perspectives*, 2001, 15, 69–86.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. “The Colonial Origins of Comparative Development: An Empirical Investigation.” *American Economic Review*, 2001.

Nunn, Nathan and Leonard Wantchekon. “The Slave Trade and the Origins of Mistrust in Africa.” *American Economic Review*, 2011, 101(7): 3221-52.

Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. “Economic shocks and civil conflict: An instrumental variables approach.” *Journal of Political Economy*, 112, 2004, no.4: 725-753.

Currie, Janet, and Reed Walker. “Traffic congestion and infant health: Evidence from E-ZPass.” *American Economic Journal: Applied Economics*, 2011, 3, no. 1: 65-90.

Chen, Ting, James Kai-sing Kung, Chicheng Ma. “Long Live Keju! The Persistent Effects of China’s Civil Examination System.” *The Economic Journal*, 2020, 130(631): 2030–2064.

Rogall, Thorsten. “Mobilizing the Masses for Genocide.” *American Economic Review*, 2021, 111, no. 1: 41-72.

He, Guojun, Tong Liu, and Maigeng Zhou. “Straw Burning, PM2.5 and Death: Evidence from China.” *Journal of*

*Development Economics*, 2020, 145: 102468.

## 2. Heterogeneous Treatment Effects

*CT* Chapter 25.7.

*AP* Chapter 4.4 - 4.5.

*WNE* [Lecture 5](#).

*JW* Chapter 18.4.

\*Angrist, Joshua, Guido Imbens, and Donald Rubin. "[Identification of Causal Effects Using Instrumental Variables.](#)" *Journal of the American Statistical Association*, 1996, 91, 444–455.

## 3. 2SLS and Weak Instruments

*CT* Chapter 4.9.

*AP* Chapter 4.6.

*WNE* [Lecture 13](#).

\*Murray, Michael P. "[Avoiding Invalid Instruments and Coping with Weak Instruments.](#)" *Journal of Economic Perspectives*, 2006, Vol 20 No 4, pp 111-132.

\*Angrist, Joshua and Alan Krueger. "[Does Compulsory School Attendance Affect Schooling and Earnings?](#)" *Quarterly Journal of Economics*, 1991, 106, 979–1014.

\*Bound, John, David Jaeger, and Regina Baker. "[Problems With Instrumental Variables Estimation When the Correlation Between the Instruments and the Endogenous Explanatory Variable Is Weak.](#)" *Journal of the American Statistical Association*, 1995, 90, 443–450.

Small, Dylan and Paul Rosenbaum. "[War and Wages: The Strength of Instrumental Variables and Their Sensitivity to Unobserved Biases.](#)" *Journal of the American Statistical Association*, 2008, 103, 924–933.

## C. Regression Discontinuity Designs

*CT* Chapter 25.6.

*AP* Chapter 6.

*WNE* [Lecture 3](#).

\*Thistlethwaite, Donald and Donald Campbell. "[Regression-Discontinuity Analysis: An Alternative to the Ex Post Fact Experiment.](#)" *Journal of*

*Educational Psychology*, 1960, 51, 309–317.

\*Imbens, Guido and Thomas Lemieux. “Regression Discontinuity Designs: A Guide to Practice.” *Journal of Econometrics*, 2008, 142, 615–635.

\*Gelman, Andrew, and Guido Imbens. “Why High-Order Polynomials should not be Used in Regression Discontinuity Designs.” *Journal of Business & Economic Statistics*, 2019, 37, no. 3: 447-456.

\*Lee, David and Thomas Lemieux. “Regression Discontinuity Designs in Economics.” *Journal of Economic Literature*, 2010, 48, 281–355.

\*Calonico, Sebastian, Matias Cattaneo, and Rocio Titiunik. “Robust Nonparametric Confidence Intervals for Regression-discontinuity Designs.” *Econometrica*, 2014, 82, 2295–2326.

\*McCrary, Justin. “Manipulation of the Running Variable In the Regression Discontinuity Design: A Density Test.” *Journal of Econometrics*, 2008, 142, 698– 714.

Hoekstra, Mark. “The Effect of Attending the Flagship State University on Earnings: A Discontinuity-Based Approach.” *Review of Economics and Statistics*, 2009, 91: 717–724.

Angrist, Joshua and Victor Lavy. “Using Maimonides’ Rule To Estimate The Effect Of Class Size On Scholastic Achievement.” *Quarterly Journal of Economics*, 1999, 114, 533–575.

DiNardo, John and David Lee. “Economic Impacts of New Unionization on Private Sector Employers: 1984-2001.” *Quarterly Journal of Economics*, 2004, 119, 1383–1441.

Anderson, Michael and Jeremy Magruder. “Learning from the Crowd: Regression Discontinuity Estimates of the Effects of an Online Review Database.” *Economic Journal*, 2012, 122, 957–989.

Dell, Melissa. “The Persistent Effect of Peru's Mining Mita.” *Econometrica*, 2010, 78(6):1863-1903.

Dell, Melissa, Nathan Lane, Pablo Querubin. “The Historical State, Local Collective Action, and Economic Development in Vietnam.” *Econometrica*, 2018, 86(6):2083-2121.

Dell, Melissa and Pablo Querubin. “Nation Building Through Foreign Intervention: Evidence from Discontinuities in Military Strategies.” *Quarterly Journal of Economics*, 2018, 133(2):701-764.

Ebenstein, Avraham, Maoyong Fan, Michael Greenstone, Guojun He and Maigeng Zhou. “New Evidence on the Impact of Sustained Exposure to Air Pollution on Life Expectancy from China’s Huai River Policy.” *Proceedings of the National Academy of Sciences*, 2017, 114(39), pp. 10384-10389.

He, Guojun, Shaoda Wang and Bing Zhang. “Watering Down Environmental Regulation in China.” *Quarterly Journal of Economics*, 2020, 135(4): 2315-2385.

Greenstone, Michael, Guojun He, Ruixue Jia, Tong Liu. “Can Technology Solve the Principal-Agent Problem? Evidence from China's War on Air Pollution.” *American Economic Review: Insights*, Forthcoming.

Attila, Ambrus, Erica Field, Robert Gonzalez. “Loss in the Time of Cholera: Long-Run Impact of a Disease Epidemic on the Urban Landscape.” *American Economic Review*, 2020, 110 (2): 475-525.

## VIII. The Problem of Statistical Inference

### A. Panel Data and Clustering

*CT* Chapter 24.5.

*AP* Chapter 8.2.

\*Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. “How Much Should We Trust Differences-in-Differences Estimates?” *Quarterly Journal of Economics*, 2004, 119, 249–275.

Cameron, Colin, Jonah Gelbach, and Doug Miller. “Robust Inference with Multi-way Clustering.” *Journal of Business and Economic Statistics*, 2011, 29, 238–249.

Sjoquist, David, and John Winters. “Building the Stock of College-Educated Labor Revisited.” *Journal of Human Resources*, 2012, 47, 270–285.

### B. Randomization Inference

Fisher, R. A. *The Design of Experiments*, 1980, Chapter 2. Oliver and Boyd. Rosenbaum, Paul. “Interference Between Units in Randomized Experiments.” *Journal of the American Statistical Association*, 2007, 102, 191–200.

Anderson, Michael. “Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects.” *Journal of the American Statistical Association*, 2008, 103, 1481–1495.

### C. Resampling

*CT* Chapter 11.

Efron, Bradley and Robert Tibshirani. “Bootstrap Methods for Standard Errors, Confidence Intervals, and Other Measures of Statistical Accuracy.” *Statistical Science*, 1986, 1, 54–75.

Cameron, Colin, Jonah Gelbach, and Doug Miller. “Bootstrap-Based Improvements for Inference With Clustered Errors.” *Review of Economics and Statistics*, 2008, 90, 414–427.

#### D. Multiplicity Adjustment

Anderson, Michael. “Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects.” *Journal of the American Statistical Association*, 2008, 103, 1481–1495.

Bennett, Craig, Abigail Baird, Michael Miller, and George Wolford. “Neural Correlates of Interspecies Perspective Taking in the Post-Mortem Atlantic Salmon: An Argument for Multiple Comparisons Correction.” *Journal of Serendipitous and Unexpected Results*, 2010, 1, 1–5.

### V. Course Policy

**The University Regulations on academic dishonesty will be strictly enforced!** Academic dishonesty is behaviour in which a deliberately fraudulent misrepresentation is employed in an attempt to gain undeserved intellectual credit, either for oneself or for another. It includes, but is not necessarily limited to, the following types of cases:

- a. Plagiarism - The representation of someone else's ideas as if they are their own. Where the arguments, data, designs, etc., of someone else are being used in a paper, report, oral presentation, or similar academic project, this fact must be made explicitly clear by citing the appropriate references. The references must fully indicate the extent to which any parts of the project are not one's own work. Paraphrasing of someone else's ideas is still using someone else's ideas, and must be acknowledged. Please check the University Statement on plagiarism on the web: <http://www.hku.hk/plagiarism/>
- b. Unauthorized Collaboration on Out-of-Class Projects - The representation of work as solely one's own when in fact it is the result of a joint effort.
- c. Cheating on In-Class Exams - The covert gathering of information from other students, the use of unauthorized notes, unauthorized aids, etc.
- d. Unauthorized Advance Access to an Exam - The representation of materials prepared at leisure, as a result of unauthorized advance access (however obtained), as if it were prepared under the rigors of the exam setting. This misrepresentation is dishonest in itself even if there are not compounding factors, such as unauthorized uses of books or notes.

You are expected to do your own work whenever you are supposed to. Incident(s) of academic dishonesty will NOT be tolerated. Cheating or plagiarism of any kind would result in an automatic FAIL grade for the course plus strict enforcement of all Faculty and/or University regulations regarding such behaviour.