BSTA 6220: Statistical Inference II
Fall 2025

**General Course Information**

Instructor: Ashkan Ertefaie
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604 Blockley Hall
Teaching Assistant:
Class Times: M/W, 12 PM - 1:30 PM
Class Location: 701 Blockley Hall
Credits: 1.0 course unit

**Course Description**

The course topic is advanced statistical inference and is a foundational course for doctoral students in statistics and biostatistics.  This course leans toward the theoretical side but the topics covered are largely motivated by modern statistical thinking and needs for estimation and inference with real data.

**Course Aims and Objectives**

This course begins by expanding on the topical coverage of BSTA 6210, beginning with an introduction to some key ideas in asymptotics for sequences of random variables and its applications to developing the properties of estimators and associated statistical inference; we will then move on to some more advanced coverage of topics in likelihood-based inference initially covered in BSTA 6210 for univariate parameter models. The course then departs from BSTA 6210, and moves on to cover estimation and inference from a perspective that significantly generalizes the so-called ‘method of moments’ (e.g., generalized estimating equations, generalized method of moments). As time permits, other useful tools in inference, such as resampling methods, are introduced from the perspective of standard error estimation, statistical testing and especially confidence interval formation.

By the end of the course the student should be able to (i) understand the similarities and differences between the univariate and multiparameter approaches to likelihood-based estimation and inference; (ii) understand the similarities and differences between likelihood-based and other approaches to statistical estimation and inference; (iii) understand the role and importance of asymptotic theory in estimation, testing and confidence interval formation; and, (iv) be able to use the many tools available in establishing the asymptotic behavior of various statistical estimators, tests, and confidence intervals.

**Course Policies and Expectations**

Homework: You are encouraged to work in small teams with your classroom peers but the write-up of the solution set and any related coding must be in your own words, per the departmental policy:

Homework assignments will involve a combination of theory and computing (preferably in R), and possibly data analysis. It will generally be due 14 days after the day assigned (due dates will be noted on the assignment and announced in class).  Homework must be submitted electronically through Blackboard before the class period where it is due. Late assignments will only be permitted in the case of emergency or serious illness; at our discretion, extensions may be provided in other circumstances, but only with sufficient notice (please do not ask for an extension on the day it is due).

Attendance/Participation: Student engagement keeps the learning active and stimulates the classroom environment. Although attendance will not formally be taken, you are expected to attend every class, and our impressions of attendance/participation will figure into your final grade (see Grading Procedures). All lectures will be offered via Zoom – your video is expected to be on for the entire class period, and cell phones should be off or otherwise silenced as appropriate. There is a possibility that some classes may be held with the option of in-person instruction depending on the Covid-19 situation in Monroe County, university rules and regulations; such lectures will be recorded or available on Zoom, with attendance not being mandatory (i.e., dependent on your own personal health situation and comfort level).

Enrollment: Standard university procedures and dates will govern the successful dropping/adding of courses, changing from a letter grade to pass/fail, and auditing the course.

**Materials and Access**

**Course website and materials:**

Blackboard site for course.

**Required Text**

 None.

**Recommended Textbooks**

Boos DD and Stefanski LA (2013) Essential Statistical Inference. Springer: New York.

Casella G and Berger RL (1990) Statistical Inference. Duxbury: Belmont, CA.

Lehmann EL and Casella G (1998) Theory of Point Estimation. Springer: New York.

Shao J (2003) Mathematical Statistics. Springer: New York.

**Other Useful Sources and References**

Billingsley P (1995) Probability and Measure. Wiley: New York.

Serfling R (1980) Approximation Theorems of Mathematical Statistics. Wiley: New York.

Van der Vaart AA (1998). Asymptotic Statistics. Cambridge University Press: UK.

Lehmann EL and Romano J (2005) Testing Statistical Hypotheses. Springer: New York.

Newey WK, McFadden D (1994) Large sample estimation and hypothesis testing.

Handbook of Econometrics, Chapter 36.

 **Assignments and Grading Procedures**

There will be approximately 4 homework assignments (60%) and a take-home final (35%); attendance with your video on (or in person, if available) and class participation round out the remainder of the semester grade (5%).

Introductory Material/ Some Review

Topic 1. Basic concepts in advanced probability; little “oh” and big “Oh” notation; sample moments, types of convergence, generating functions.

Topic 2. Asymptotic expansions; asymptotic linearity; influence functions; Delta method.

Likelihood-based statistical inference

Topic 3. Review of likelihood and one-parameter MLEs; asymptotic theory: existence; strong and weak consistency; asymptotic normality (AN); efficiency and the Cramer-Rao lower bound; asymptotic relative efficiency (ARE).

Topic 4. Multi-parameter MLEs: multiparameter likelihood; information identity; methods for computing MLEs (eg, Fisher-scoring, Newton-Raphson, optimization); large-sample theory and conditions for consistency and AN of MLEs; extension of efficiency concepts and the Cramer-Rao lower bound to the multivariate setting; one-step estimation. Examples of exceptions to usual assumptions/conditions.

Topic 5. Basic hypothesis testing: likelihood ratio, Wald, and score tests. Associated methods for confidence interval construction.

Topic 6. Inference with nuisance parameters: (a) estimation: conditional likelihood, marginal likelihood, profile likelihood; (b) testing: generalized Neyman-Pearson lemma, generalized likelihood ratio tests, generalized Wald and score (i.e., tests for parameter subsets and partitions of the variance-covariance matrix). Associated methods for confidence interval construction.

Semi-parametric methods for estimation and testing

Topic 7. Review of multivariate method of moments; M-estimation; Z-estimation; GEE-1 and GEE-2; GMM and quadratic inference functions (QIF).

Course Summary:

| Date | Details | Due |
| --- | --- | --- |
| Fri Sep 12, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101529&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 17, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101602&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Sep 19, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101530&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 24, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101603&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Sep 26, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101531&include_contexts=course_1864113) | 1pm to 2pm |
| Assignment [HW1](https://canvas.upenn.edu/courses/1864113/assignments/13964794) | due by 5pm |
| Sun Sep 28, 2025 | Assignment [HW1](https://canvas.upenn.edu/courses/1864113/assignments/13964794)(1 student) | due by 5pm |
| Wed Oct 1, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101604&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 3, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101532&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 8, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101605&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 10, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101533&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 15, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101606&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 17, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101534&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 22, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101607&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 24, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101535&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 29, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101608&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 31, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101536&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 5, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101609&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 7, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101537&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 12, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101610&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 14, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101538&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 19, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101611&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 21, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101539&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 26, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101612&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 28, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101540&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Dec 3, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101613&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Dec 5, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101541&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Dec 10, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101614&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Dec 12, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101542&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Dec 17, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101615&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Dec 19, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101543&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Dec 24, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101616&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Dec 26, 2025 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101544&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Dec 31, 2025 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101617&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jan 2, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101545&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jan 7, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101618&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jan 9, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101546&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jan 14, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101619&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jan 16, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101547&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jan 21, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101620&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jan 23, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101548&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jan 28, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101621&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jan 30, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101549&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Feb 4, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101622&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Feb 6, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101550&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Feb 11, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101623&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Feb 13, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101551&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Feb 18, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101624&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Feb 20, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101552&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Feb 25, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101625&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Feb 27, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101553&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Mar 4, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101626&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Mar 6, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101554&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Mar 11, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101627&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Mar 13, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101555&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Mar 18, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101628&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Mar 20, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101556&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Mar 25, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101629&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Mar 27, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101557&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Apr 1, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101630&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Apr 3, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101558&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Apr 8, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101631&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Apr 10, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101559&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Apr 15, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101632&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Apr 17, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101560&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Apr 22, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101633&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Apr 24, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101561&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Apr 29, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101634&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri May 1, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101562&include_contexts=course_1864113) | 1pm to 2pm |
| Wed May 6, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101635&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri May 8, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101563&include_contexts=course_1864113) | 1pm to 2pm |
| Wed May 13, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101636&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri May 15, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101564&include_contexts=course_1864113) | 1pm to 2pm |
| Wed May 20, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101637&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri May 22, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101565&include_contexts=course_1864113) | 1pm to 2pm |
| Wed May 27, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101638&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri May 29, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101566&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jun 3, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101639&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jun 5, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101567&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jun 10, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101640&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jun 12, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101568&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jun 17, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101641&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jun 19, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101569&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jun 24, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101642&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jun 26, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101570&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jul 1, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101643&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jul 3, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101571&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jul 8, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101644&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jul 10, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101572&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jul 15, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101645&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jul 17, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101573&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jul 22, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101646&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jul 24, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101574&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Jul 29, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101647&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Jul 31, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101575&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Aug 5, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101648&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Aug 7, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101576&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Aug 12, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101649&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Aug 14, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101577&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Aug 19, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101650&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Aug 21, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101578&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Aug 26, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101651&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Aug 28, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101579&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 2, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101652&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Sep 4, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101580&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 9, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101653&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Sep 11, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101581&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 16, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101654&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Sep 18, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101582&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 23, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101655&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Sep 25, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101583&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Sep 30, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101656&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 2, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101584&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 7, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101657&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 9, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101585&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 14, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101658&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 16, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101586&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 21, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101659&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 23, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101587&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Oct 28, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101660&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Oct 30, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101588&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 4, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101661&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 6, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101589&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 11, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101662&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 13, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101590&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 18, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101663&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 20, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101591&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Nov 25, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101664&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Nov 27, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101592&include_contexts=course_1864113) | 1pm to 2pm |
| Wed Dec 2, 2026 | Calendar Event [TA OH](https://canvas.upenn.edu/calendar?event_id=5101665&include_contexts=course_1864113) | 1:30pm to 2:30pm |
| Fri Dec 4, 2026 | Calendar Event [Professor OH](https://canvas.upenn.edu/calendar?event_id=5101593&include_contexts=course_1864113) |  |