

# Course schedule

04 September 2026

## Warning

This is a preliminary schedule and may be subject to change.

| Date   | Topic                                            | Pre-class Readings                  | Supp. Material |
|--------|--------------------------------------------------|-------------------------------------|----------------|
| 08 Sep | <b>No Class</b> (Imagine Day)                    |                                     |                |
| 10 Sep | Overview + review of probability                 | AoS 1–2                             |                |
| 15 Sep | Expectation and inequalities                     | AoS 3–4                             |                |
| 17 Sep | Convergence of random variables                  | vdV 2.1–2.2                         | AoS 5          |
| 22 Sep | Convergence of random variables & Delta method   | vdV 2.3                             | AoS 5          |
| 24 Sep | Fundamentals of inference                        | vdV 1; vdV 3.1, 3.4;<br>AoS 6       |                |
| 29 Sep | Estimating the CDF and statistical functionals   | AoS 7                               |                |
| 01 Oct | Bootstrap methods in practice                    | AoS 8                               | CASI 10        |
| 06 Oct | Consistency of bootstrap methods                 | vdV 23.1–23.2<br>(excluding 23.2.1) |                |
| 08 Oct | Parametric frequentist inference                 | AoS 9                               | CASI 4–5       |
| 13 Oct | Parametric Bayesian inference                    | AoS 11                              | CASI 3         |
| 15 Oct | Statistical decision theory                      | AoS 12                              |                |
| 20 Oct | TBD                                              |                                     |                |
| 22 Oct | <b>Midterm</b>                                   |                                     |                |
| 27 Oct | Empirical risk minimization and cross-validation |                                     |                |
| 29 Oct | Nonparametric curve-fitting: density estimation  | AoS 20.1–20.3                       | AoNS 6.1–6.3   |
| 03 Nov | Nonparametric curve-fitting: regression          | AoS 20.4, 21                        | AoNS 4–5       |

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|--------|----------------------------------------------------------------|------------------------|----------------|
| 05 Nov | Normal means model, James-Stein estimator and ridge regression | CASI 7, AoNS 7.1       |                |
| 10 Nov | <b>No Class</b> (Midterm break)                                |                        |                |
| 12 Nov | SURE and the James-Stein estimator again                       | AoNS 7.2–7.3, 7.4, 7.6 | AoNS 7.5       |
| 17 Nov | Survival analysis                                              | CASI 9                 |                |
| 19 Nov | EM algorithm                                                   | AoS 9.13.4 + TBD       |                |
| 24 Nov | Consistency of Z-/M-estimators                                 | vdV 5.1–5.2            |                |
| 26 Nov | Asymptotic normality of Z-/M-estimators                        | vdV 5.3                |                |
| 01 Dec | Nonlinear least squares and one-step estimators                | vdV 5.3, 5.7           |                |
| 03 Dec | Nuisance parameters                                            | TBD                    |                |

### ! Important

The final exam will be determined by UBC. It will be scheduled between December 11 and December 22.

Do not schedule any travel before the university determines the final exam schedule.