Welcome to BMSC 620

Emile Latour

January 5, 2026

Welcome to BMSC 620

Emile Latour, MS
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This course builds on prior versions developed by
Meike Niederhausen and **Nicky Wakim**, with updates and revisions for Winter 2026.

Some important tasks

- **Bookmark the course website**
  https://emilelatour.github.io/BMSC_620_W26/

- **Complete Homework 0 by Sunday at 11:00 pm**
  - Get comfortable with RStudio and Quarto
  - Make sure you can render a document successfully
  - This assignment is graded for completion only

- **Make sure you have access to the textbook**
  - Details are posted on the course website

Let's visit the website: Homepage

BMSC 620: Introduction to Biostatistics

Winter 2026

Welcome to **BMSC 620: Introduction to Biostatistics.** This course introduces fundamental statistical methods commonly used in the biomedical and health sciences, with an emphasis on understanding, interpretation, and clear communication rather than mathematical derivations.

We will begin with descriptive statistics and graphical methods for summarizing data, followed by an introduction to basic probability concepts that motivate statistical inference. Key probability and sampling distributions, including the binomial, Poisson, and normal distributions, will be introduced as tools for understanding variability and uncertainty in data.

The course will then cover confidence intervals and hypothesis testing for one- and two-sample problems, using both parametric and nonparametric approaches. Additional topics include inference for proportions, analysis of two-way tables, one-way analysis of variance (ANOVA), correlation, and simple linear regression.

Throughout the course, emphasis will be placed on selecting appropriate statistical methods, interpreting results, and communicating conclusions in a way that is accessible to audiences without formal statistical training. Students will gain hands-on experience using statistical software (R) for basic data management, visualization, and interpretation of output generated by statistical analyses, as well as for building reproducible analytical workflows.

Course materials and structure for BMSC 620 were developed by Emile Latour and informed by prior offerings taught by Meike Niederhausen and Nicky Wakim. Portions of the syllabus, resources, and instructional approach were adapted from their courses, with permission, and modified for this offering.

Instructor	Office hours	Course details	Contact
Emile Latour, MS	Emile Thursday, 1:00–2:00 PM	Mondays, Wednesdays	E-mail is the best way to get in contact with me. I will try to respond to all course-related e-mails within 24 hours Monday-Friday.
KCRB		January 5–March 20	
latour@ohsu.edu		9:00 AM–11:30 AM	
		In-person, RJH 4320	

Course information on the website

- **Syllabus**
    - What this course is about
    - How grading and homework work
    - Exams, attendance, and course policies
- **Instructors**
    - Contact information
    - Office hours
    - How to get help
- **Resources**
    - R and RStudio installation instructions
    - Course materials and datasets
    - Additional support resources

Let's visit the website: Syllabus

Course info > Syllabus

Syllabus

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Key course info

- **Course website**: This site is the hub for schedules and materials. Assignments and grades will be managed in **Sakai**.
- **Software**: We will use **R and RStudio** for homework and in-class examples. (Instructions will be posted on the Resources page.)
- **One-day room change**: Class will meet in **MAC 3198 on January** 21 only.

Course communication

Announcements
For important or time-sensitive information (e.g., due date changes, clarifications, reminders), I will post announcements on **Sakai**. These announcements will also be delivered to your OHSU email address.

General course questions
It is normal to have questions about assignments, course materials, or logistics. Before emailing me, please check the course website and recent announcements, as many questions are shared by multiple students.

If your question is still unanswered, you are welcome to email me.

Email
Email is the best way to reach me for course-related questions. I aim to respond within **24 hours, Monday–Friday**. I do not regularly monitor email on evenings or weekends.

For privacy reasons, questions about grades or personal circumstances should always be sent by email.

Let's visit the website: Instructors

BMSC 620: Introduction to Biostatistics

Course info > Instructors

Instructors

Teaching team

Emile Latour, MS (Instructor)

- **Email:** latour@ohsu.edu
- **Campus location:** KCRB
- **Pronouns:** he/him/his
- **Name:** Please feel free to call me **Emile** (pronounced "eh-MEEL" or "ah-MEEL").
  Last name: **Latour** (pronounced "luh-TOOR").
- **Best way to contact me:** Email is best for course logistics. Office hours are best for homework, R help, and concepts.

Teaching assistant(s)

Joseph Hwang (TA)

- **Email:** hwangjo@ohsu.edu

> Note: If you are unsure who to contact, email Emile and I will route your question.

Office hours

All office hours will be held via Webex unless otherwise noted.

Emile (Instructor)

- **Time:** Thursday, 1:00-2:00 PM
- **Webex:** https://ohsu.webex.com/meet/latour

Let's visit the website: Resources

BMSC 620: Introduction to Biostatistics

Course info > Resources

Resources

This page contains links to course materials, software setup, and shared resources. I will update it throughout the term.

Textbook and readings

Primary textbook

Introductory Statistics for the Life and Biomedical Sciences by Julie Vu and David Harrington

- The textbook website is https://openintro.org/book/biostat/
- The full PDF is free (with an optional contribution).
- A tablet-friendly PDF version with smaller margins is also available and may be easier to read.

Supplementary reading (optional)

- *An Introduction to R* (free pdf)

Course platforms

Sakai

Assignments, submissions, and grades will be managed through Sakai, OHSU's learning management system.

Links to Sakai assignments will be provided on this website.

Shared course folder (OneDrive)

A shared OneDrive folder will be used to distribute datasets, handouts, and other course files that do not live directly on this website.

- The folder will include datasets used in class and on homework.

How this course runs on the website

- **Schedule**
  - Big-picture view of topics and due dates
  - Updated if anything changes
- **Weekly materials**
  - What to read or review
  - Slides, code, and links for each class
- **Homework**
  - Assignment templates
  - Due dates and grading expectations
- **Exams**
  - Midterm and final format
  - Timing, coverage, and policies

Let's visit the website: Schedule

Schedule

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Week	Dates	Lesson	Topics	Chapter sections
1	Mon, 01/05	0	Welcome	
		1	Intro to Data, Summarizing numerical data	1.1-1.4
	Wed, 01/07	2	Introduction to R & RStudio	
	Sun, 01/11		HW 0 due @ 11 pm	
2	Mon, 01/12	3	Probability	2.1-2.4
	Wed, 01/14	4	Data visualization, exploratory data analysis (EDA), and summarizing categorical data	1.5-1.7
	Sun, 01/18		HW 1 due @ 11 pm	
3	Mon, 01/19		No class, Martin Luther King Jr. Day	
	Wed, 01/21	5	Data visualization (continued)	1.5-1.7
	Sun, 01/25		HW 2 due @ 11 pm	
4	Mon, 01/26	6	Random variables and the binomial distribution	3.1-3.2
	Wed, 01/28	7	Normal distribution and sampling distributions	3.3-3.4

Let's visit the website: Weekly materials

BMSC 620: Introduction to Biostatistics

Weekly materials > Week 1

Week 1

Welcome & Introduction to Data

Overview

This week introduces the course structure, expectations, and the role of data as the foundation of biostatistics. We will focus on how data are collected and how to summarize numerical variables.

By the end of the week, you should be able to:

- describe different types of data,
- compute and interpret basic numerical summaries,
- feel comfortable navigating R and RStudio.

Class meetings

Monday

- Welcome and course overview
- Introduction to data
- Summarizing numerical data

Wednesday

- Introduction to R and RStudio
- Working with simple datasets in R

Readings (before class)

Let's visit the website: Homework

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Home Schedule Homework Exams Resources

Homework

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> **File naming and submission**
>
> **File naming**: `Lastname_FirstInitial_HW##` (example: `Latour_E_HW01`)
>
> **Submit** both** files on Sakai:
>
> - Lastname_FirstInitial_HW##.qmd
> - Lastname_FirstInitial_HW##.html

Homework assignments are due on **Sundays at 11:00 pm** unless otherwise noted.

Start from the provided `.qmd` template for each assignment.

Homework schedule

All homework files are distributed through OneDrive. Each homework link contains everything you need for that assignment.

HW	Due (@11pm)	Files	Preview
0	01/11	HW 00 files (OneDrive)	View HW 00
1	01/18	(to be posted)	(to be posted)
2	01/25	(to be posted)	(to be posted)
3	02/01	(to be posted)	(to be posted)
4	02/08	(to be posted)	(to be posted)
5	02/22	(to be posted)	(to be posted)

Let's visit the website: Exams

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Exams

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See Sakai

Structure for this course

- Learning the core tools to **understand and interpret statistics**

- Some pieces may feel abstract or disconnected at first — that's normal

- The goal is to build a **toolbox** that lets you analyze data *and* explain what the results mean

Let me know if you have questions

Or if you notice:

- something unclear

- something confusing

- or something that contradicts the course site

That's it for logistics

- The course website is your home base

- Homework 0 is due **Sunday at 11:00 pm**

- Reach out early if something is confusing

Let's shift gears and start the course.