

# **STAT 8670 - Computational Methods in Statistics**

Chi-Kuang Yeh

2026-05-13

# Table of contents

<b>Preface</b>	<b>3</b>
Description . . . . .	3
Prerequisites . . . . .	3
Instructor . . . . .	3
Office Hour . . . . .	3
Grade Distribution . . . . .	3
Assignment . . . . .	4
Midterm . . . . .	4
Project . . . . .	4
Topics and Corresponding Lectures . . . . .	4
Recommended Textbooks . . . . .	4
Side Readings . . . . .	4

# Preface

## Description

Topics included are optimization, numerical integration, bootstrapping, cross-validation and Jackknife, density estimation, smoothing, and use of the statistical computer package of S-plus/R.

## Prerequisites

MATH 4752/6752 – Mathematical Statistics II, and the ability to program in a high-level language.

## Instructor

[Chi-Kuang Yeh](#), I am an Assistant Professor in the Department of Mathematics and Statistics, Georgia State University.

- Office: Suite 1407, 25 Park Place.
- Email: [cych@gsu.edu](mailto:cych@gsu.edu).

## Office Hour

TBA

## Grade Distribution

- TBA

## Assignment

- TBA

## Midterm

- TBA

## Project

- TBA

## Topics and Corresponding Lectures

Those chapters are based on the lecture notes. This part will be updated frequently.

Status	Topic	Lecture Covered
	R Programming	TBA

## Recommended Textbooks

- Givens, G.H. and Hoeting, J.A. (2012). *Computational Statistics*. Wiley, New York.
- Rizzo, M.L. (2007) *Statistical Computing with R*. CRC Press, Boca Baton.
- Hothorn, T. and Everitt, B.S. (2006). *A Handbook of Statistical Analyses Using R*. CRC Press, Boca Raton.

## Side Readings

- Wickham, H., Çetinkaya-Rundel, M. and Grolemund, G. (2023). *R for Data Science*. O'Reilly.