45%

**Textbook:** Heat and Mass Transfer: Fundamentals and Applications (5<sup>th</sup> Edition), by Yunus A. Çengel

and Afshin J. Ghajar

Class Time: Section A – MWF: 11:00 – 11:50 am McLean209

Instructors: Prof. Xian (Annie) Zhang, Office: EAS 407 and Burchard 308A, 201-216-5386; xzhang4@stevens.edu

Office Hours: Friday 1:00 - 4:00 pm, https://stevens.zoom.us/j/8238607329, or by appointment

TA: Carly Walker, <a href="mailto:cwalker1@stevens.edu">cwalker1@stevens.edu</a>

Office Hours: Monday 9:00 – 11:00 am, EAS 304-Fielding Lab,

Wednesday 9:00 - 11:00 am, https://stevens.zoom.us/j/6489169885

Grading Scheme: Quizzes (3 x 15 %)

Homework/Attendance/Professionalism
15%
Project

Final Examination 30%

Quizzes and the final exam will be <u>open formula sheet only</u> which will be provided (all other notes, homework/exam problems, etc., are prohibited). No make-up quizzes will be given. If you miss a quiz (due to emergency only) and you have a valid excuse, your grade will be prorated. Paper submission of the homework and project are mandatory. No late submission will be accepted. This syllabus may be notified without notice. A tentative course schedule is included below along with associated text references (reading assignment):

Date	Subject	Text Reference
Jan 17, 19	Introduction to Heat Transfer	1.1 - 1.10
Jan 22, 24, 26	Introduction to Heat Conduction	2.1 - 2.7
Jan 29, 31, Feb 2	Steady-State Heat Conduction	3.1 - 3.7
Feb 5, 7	Transient Heat Conduction	4.1 - 4.4
Feb 9	Quiz #1	
Feb 12, 14	Numerical Methods in Heat Conduction	5.1 - 5.5
Feb 16, 21, 23 (No class on Feb 19 due to PD)	Fundamentals of Convection	6.1 - 6.11
Feb 26, 28, Mar 1	External Forced Convection	7.1 - 7.4
Mar 4, 6, 8	Internal Forced Convection	8.1 - 8.6
Mar 18, 20, 22	Natural Convection	9.1 - 9.6
Mar 25	Quiz #2	
Mar 27, Apr 1, 3 (No class on Mar 29 due to GF)	Boiling and Condensation	10.1 - 10.7
Apr 5, 8, 10	Heat Exchangers	11.1 - 11.6
Apr 12, 15	Fundamentals of Thermal Radiation	12.1 - 12.6
Apr 17	Quiz #3	
Apr 19, 22, 24	Radiation Heat Transfer	13.1 - 13.6
Apr 26	Review & Summary	