



Izmir Institute of Technology / Department of Civil Engineering

CE 443 – Introduction to Historical Building Materials

2026-2027 Fall Semester

Instructor: Dr. Yunus Seyrek (yunusseyrek@iyte.edu.tr)

Research Assistant: Kadir Aktaş (kaktas@iyter.edu.tr)

Course Time and Location:

Tuesday

- 13:30-14:15
- 14:30-15:15

Wednesday

- 11:45-12:30

Room: CZ12

Textbook and References:

- Wright, G. R. (2022). *Ancient Building Technology, Volume 1: Historical Background* (Vol. 4). Brill.
- Wright, M. (2005). *Ancient Building Technology, Volume 2: Materials* (2 Vols) (Vol. 7). Brill.
- Erdoğan, S. T., & Erdoğan, T. Y. (2007). *Bağlayıcı malzemelerin ve betonun onbinyıllık tarihi*. ODTÜ Yayıncılık.

Grading:

- Midterm: 30%
- Presentations 20%
- Final Exam: 50%

Course Content:

Historical overview of building materials from antiquity to the pre-modern era; traditional binders (lime, gypsum, earthen materials, pozzolans, and early cements); historical mortars, plasters, and masonry units; timber, stone, and metals in historical construction; deterioration mechanisms of historical materials; sampling and characterization methods for historical building materials (petrographic analysis, XRD, SEM, chemical analysis); case studies from historical structures and conservation practice.