Center for Archaeological Materials/ Center for Materials Research in Archaeology and Ethnology

The mission of the Center for Materials Research in Archaeology and Ethnology (CMRAE), a consortium of eight Boston-area educational and cultural institutions, is to advance our understanding of prehistoric and nonindustrial societies through analysis of the structure and properties of materials associated with human activity. Plant and animal food remains and human skeletal material, as well as metal, ceramic, stone, bone, and fiber artifacts, are the objects of study, along with the environments within which these materials were produced and used. At the Center for Archaeological Materials (CAM) at MIT, investigators concentrate on the materials-processing technologies that transform natural materials into cultural objects.

CAM is administered by the Office of the Provost. In 1998–1999, the Department of Materials Science and Engineering established a new undergraduate major in archaeology and materials, Course 3-C, as well as an interdisciplinary doctoral degree program in archaeological materials. These are the only academic degree programs of their kind in the United States. The graduate students enrolled in the PhD program and the undergraduate Course 3-C majors who participate in the Undergraduate Research Opportunities Program all carry out their dissertation and senior thesis research in the CMRAE laboratory facilities.

CMRAE is responsible for teaching annually the two-semester (fall and spring) graduate-level subject 3.984-3.989 Materials in Human Experience, which is open to graduate students from any of the eight consortium members. Graduate students spend a full academic year in seminar and working in the CMRAE Graduate Archaeological Materials Laboratory at MIT. A group of 10 to 12 faculty members from among the CMRAE institutions offers the annual spring undergraduate subject 3.985 Archaeological Science to students from the consortium. Both the graduate level subject and the undergraduate subjects are taught at MIT.

MIT closed the campus in mid-March 2020 in response to onset of the Covid-19 pandemic. As a result, CMRAE was unable to continue teaching the 3.989 spring semester portion of Materials in Human Experience, which involves heavy, continued, and supervised use of the laboratory's special equipment. Among the enrolled students were several from Boston University who were counting on including in their master's theses the results of their lab experimental work. Mary Lindstrom, our environment, health, and safety coordinator, facilitated access to the CMRAE Graduate Laboratory for the Boston University students who were granted MIT status as research affiliates. On a one-day-per-week schedule, these students were assisted in their laboratory research from November to their graduation in June.

The CMRAE staff—Jennifer Meanwell, lecturer and research associate, and William Gilstrap, Graduate Laboratory supervisor and technical instructor—following MIT's strict instructions, have not been able to reopen the Graduate Laboratory for purposes of teaching this academic year. They will continue with the Center's normal teaching schedule in September 2021. However, they designed a new subject, 3.097 Ancient

Engineering: Ceramic Technologies, that they taught in the fall semester. This subject explores human interactions with ceramic materials from 25,000 years ago until the 16th century CE, combining evidence from materials science and engineering with data gathered in archaeological and ethnographic investigations.

Subject 3.985, Archaeological Science, the CMRAE/CAM undergraduate subject offered jointly by the departments of Materials Science and Engineering, Chemistry, and Earth, Atmospheric, and Planetary Sciences, continues to enjoy high popularity. In spring 2021 the subject was taught virtually to 67 students. By contrast, in pre-pandemic 2019, 139 MIT students were enrolled. Eleven faculty members from three CMRAE institutions lectured in the subject.

Heather Lechtman
Director
Professor of Archaeology and Ancient Technology