The foundations of modern cartography begin with the researches of the Greek astronomer Claudius Ptolemy in the second century and the re-discovery of his texts in the late Middle Ages and Renaissance. Ptolemy invented the concepts of latitude and longitude and also the idea of a map projection. Early mapmakers used Ptolemy’s ideas and extended them to account for the new discoveries made by explorers in the late fifteenth and early sixteenth centuries. These early modern maps also took full benefit of the developments in mathematics, navigation and astronomy to display the world visually in innovative ways. Parallel to the tradition of Ptolemy was another and more mysterious form of cartography that appeared around 1250 and died out in the mid-sixteenth century. These maps took the form of a medieval sailing chart and were made for use on board trading vessels that sailed the Mediterranean Sea. Charts like these, called portolans, generally survive as large manuscript maps on vellum and derive from a mapmaking tradition that does not take into account map projections and whose original construction methods still baffle scholars today.

This course will introduce students to the earliest forms of cartography and discuss both the scientific and artistic innovations that made these two kinds of mapmaking possible. We will examine in detail the construction methods of some of the masterpieces of Renaissance cartography, such as the 1507 and 1516 world maps by Martin Waldseemüller, and other examples of early cartography found in the Library of Congress. Students will look closely at the making of portolan charts and take full advantage of new analytical research on their make-up. In addition to close scrutiny of the maps themselves, class discussion and reading will consider medieval and early Renaissance theories of the earth and the relationship of cartography to contemporary developments in astronomy and navigation, as well as the social and cultural aspects of patronage and production.

Late in the course, students will be introduced to digital humanities analysis tools, such as MapAnalyst, and learn to use these new computational methods in order to help date and understand the complex notions of error and knowledge transmission that are at the foundations of modern cartography.

This course is taught by John Hessler, Specialist in Modern Cartography and Geographic Information Science and Curator of the Jay I. Kislak Collection of the Archaeology of the Early Americas at the Library of Congress.

A Fellow of the Royal Geographical Society, he is also a lecturer in early American archaeology in the Graduate School of Advanced Studies at Johns Hopkins University. His current research interest focuses on archaeological GIS, discrete differential geometry for 3D modeling and the use of 3D Imaging in archaeology and cultural heritage conservation. He is working on a new translation and critical edition of Carl Friedrich Gauss’ Disquisitiones Generales Circa Superficies Curvas (1828), which contains fundamental theorems related to the foundations of differential geometry and computer mapping.

To apply, visit www.rarebookschool.org/application/

Questions? Call 434-924-8851 or email rbsprograms@virginia.edu

www.rarebookschool.org