



UMBC

Master of Professional Studies and Graduate Tool Guide: *Geographic Information Systems*

GENERAL INFORMATION

For questions about these tools and their use in the program, contact:

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TOOL COVERAGE IN GEOGRAPHIC INFORMATION SYSTEMS (By Course No. - Titles in Course section of Web-Page)

Tools	Core Courses	Elective Courses	Optional Courses *
ArcGIS Pro	666, 673, 675, 774	771, 775, 776, 777	700, 780
QGIS	668, 673	777, 779	700, 780
GeoDa	774	779	700, 780
Python	673, 675	775	700, 780
R (Studio)	666, 668, 774	778, 779	700, 780
GitHub	All	All	All
ArcGIS Ecosystem	675	671, 771, 775, 777	700, 780
Pix4D	----	680, 776	700, 780
Apache Tomcat	675	671, 775	700, 780
JavaScript	675	775	700, 780
PostGIS	----	671, 771	700, 780
PostgreSQL	----	671, 771	700, 780
Quarto	668	778	700, 780
ESA SNAP	----	680, 776	700, 780

* indicates course may or may not use these tools depending on the course subject or project.

The tools listed here represent a well-rounded practical GIS education. Each tool was selected because it plays a common role in the toolbox of anyone doing GIS or spatial analysis in any pursuit. Students will learn to use these tools the way that professionals do: analyze spatial patterns, solve geographic problems, automate processes, and visualize results clearly and credibly. Our curriculum ensure our students graduate with fluency in multiple platforms, adaptable to different work environments, and ready to lead instead of follow in the modern geospatial workforce. **See Course section for Titles & details.**

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