

Annual Academic Assessment Report
Department of Geosciences (GEOS)
MS GEOGRAPHY (GEOGMS)
May 2025

Report annually to the Dean of the college/school the following:

☐ **Direct Assessment Results**

- Student performance in the two required classes is a direct method of assessing student competence in the theoretical and applied aspects of geographic knowledge:
 - *GEOS 50903/40903 History and Philosophy of Geography* – This class is offered as a required graduate class and as a capstone class for undergraduate majors. Graduate students submit two exams, a short project, and a long paper detailing how their research fits into the discipline. This paper also serves as a first draft of the student's thesis literature review. In Fall 2024, there were seven GEOGMS graduate students enrolled in the course. All seven successfully completed the class with passing grades.
 - *GEOS 56102 Research Methods in Geosciences* – This class is offered to both Geography and Geology MS students and so has higher enrollment than the History of Geography class. In Spring 2025 the class had three GEOGMS students enrolled. Students were required to submit a draft literature review and methodology and subsequently revise these assignments into a full research proposal. All three MS Geography students received passing grades in the class.
- Successful completion of MS Geography degree requirements:

- During the 2024-2025 academic year (Summer 2024 to Spring 2025 inclusive) seven students completed their master's degrees (see attached list).

□ **Indirect Assessment Results**

- Post graduate employment:
 - Of the seven students who graduated between Summer 2024 and Spring 2025, three students are previously employed full-time in either GIS/Cartography analyst positions (Otting) or in fields relevant to their research (Jones and Spiller). One student began the Environmental Dynamics PhD program at the University of Arkansas starting in Fall 2024 after graduating in Summer 2024 (Kissi-Somuah). One student will begin employment as a Traffic Safety Analyst at the Arkansas Department of Transportation in May 2025 (Tay). Two students are currently looking for employment after finishing their degrees in Spring 2025 (Clark and McBroom).
- During the 2024-2025 academic year, five GEOG MS students presented posters at the 2024 GeoHog conference held on 5 April 2025 (Seth Guidry, Braedyn McBroom, Fabiha Shafi Mim, Julie Nelson, and Jon Webb). One GEOG MS student presented a paper during the conference (Michaelmary Chukwu). (NB. The GeoHog conference is an annual internal department conference.)
- Four GEOG MS students presented at the annual meeting of the American Association of Geographers in Detroit, Michigan (24-28 March 2025):
 - Michaelmary Chukwu presented a paper, titled " Understanding Urban Park Visitors' Pattern in New York City and the Growing Inequity Issues: A longitudinal Study with SafeGraph Foot Traffic Data."

- Seth Guidry presented a poster, titled “Investigating Land Surface Temperature and Air Temperature in Central Arkansas During the Late August 2023 Heat Wave.”
 - Braedyn McBroom presented a poster, titled “Assessing Influential Factors of Winter-Related Property Damage in Arkansas.”
 - Raihan Sorker presented a poster, titled “Influences of the Spatiotemporal Characteristics of Urban Heat Islands on Historical Land Surface Phenology.”
- o GEOG MS student publications during 2024-2025 (student names highlighted in **bold**):
- Aduloju, O. T., Anofi, A. O., **Chukwu, M. T.**, Adeniran, I. A., & Adekunle, S. T. (2025). Space–Time Analysis of Urban Green Spaces’ Disappearance in Ilorin, Nigeria. *The Professional Geographer*, 1-17.
 - **Chukwu, M.**, Huang, X., Wang, S., Li, X., & Wei, H. (In press). Urban park accessibility assessment using human mobility data: a systematic review. *Annals of GIS*, 1-18.
 - **Chukwu, M.**, Huang, X., Wang, S., Yang, D., & Ye, X. (2024). Crowdsourcing geographic information for terrorism-related disaster awareness and mitigation: perspectives and challenges. *Geo-spatial Information Science*, 1-18.
 - Wang, S., Huang, X., Liu, P., Zhang, M., Biljecki, F., Hu, T., ...& **Chukwu, M.**.... & Bao, S. (2024). Mapping the landscape and roadmap of geospatial artificial intelligence (GeoAI) in quantitative human geography: An extensive systematic review. *International Journal of Applied Earth Observation and Geoinformation*, 128, 103734.

- **McBroom, B. D.**, Rahn, D. A., & Brunsell, N. A. (2024). Urban fraction influence on local nocturnal cooling rates from low-cost sensors in Dallas-Fort Worth. *Urban Climate*, 53, 101823.
- Laird, N. F., Crossett, C. C., Britt, C. J., Metz, N. D., Carmer, K., & **McBroom, B. D.** (2024). Synoptic Conditions and Lake-to-Lake Connections for Days with Lake Effect on All of the Great Lakes. *Journal of Applied Meteorology and Climatology*, 63(5), 617-629.

☐ **Any changes to degree/certificate planned or made on the basis of the assessment and analysis**

No changes anticipated based on the current year's assessment.

☐ **Any changes to the assessment process made or planned.**

No changes anticipated based on the current year's assessment.

2024-2025 MS Graduates

Daniel Kissi-Somuah – Geography MS (Summer 2024)

Michael Jones – Geography MS (Fall 2024)

Harrison Spiller – Geography MS (Fall 2024)

Grace Clark – Geography MS (Spring 2025)

Braedyn McBroom – Geography MS (Spring 2025)

Angie Otting – Geography MS (Spring 2025)

Weilun Tay – Geography MS (Spring 2025)