

Guide to Graduate Studies

Master of Science (M.S.) in Geography

Department of Geography, Virginia Tech

Overview

The Master of Science degree program in Geography is a 31-credit hour curriculum that is designed for completion within two years. Explicit course requirements are limited to allow for flexibility in creating an individualized program, although spatial thought and analytics are central elements. The degree is most commonly earned through the thesis option, in which coursework is complemented with rigorous research of a geographic nature that is guided by faculty advisor(s) and culminates in a written thesis that is formally defended, faculty approved, and submitted to the Graduate School. The less-common path to degree completion is the non-thesis option, which combines more extensive course work with an abridged faculty-guided geographic research project that culminates in a faculty-approved written project report. A third path for earning the degree is through the Accelerated Master of Science program. Specific to Virginia Tech undergraduate students, the accelerated degree program allows for overlap of the final year of undergraduate study and the first year of graduate study, conceivably yielding undergraduate and graduate degrees in five years. Students pursuing the accelerated degree may choose either the thesis or non-thesis option.

Coursework

Every graduate student must submit a *Plan of Study* (POS) for approval by the conclusion of the first semester in the program. The POS maps the coursework that will satisfy the degree requirements. At least 31 credit hours are required, distributed across explicitly defined learning areas. The POS must be approved by the faculty advisor(s) and members of the thesis/project committee, the composition of which is established through student-advisor(s) negotiation.

For both the thesis and non-thesis options, 13 credits must come from “core” courses that include GEOG 5014 (*Geographic Theory and Research*, 3-credits), GEOG 5004 (*Current Geographic Research*, 1-credit), GEOG 5034 (*Analysis of Spatial Data*, 3-credits), GEOG 5164G (*Advanced Qualitative Methods and Ethics in Geography*, 3-credits), and a 3-credit methods course that is either selected from an established pair of course options or is a course that is approved by the student’s faculty advisor. Likewise, both thesis and non-thesis options require a minimum of six credit hours from geography courses, and a minimum of three credit hours from non-geography “cognate” courses. Lastly, the thesis option requires a minimum of six hours of GEOG 5994 (*Research and Thesis*), while the non-thesis option requires a minimum of three hours of GEOG 5904 (*Project and Report*).

The distribution of the minimum requirements totals 19 credit hours for the thesis option and 16 credit hours for the non-thesis option, out of the 31 credit hours that are required, leaving 12 and 15 credit hours, respectively, for tailoring the degree. Three restrictions apply: (1) At least 24 credit hours for the thesis option and 27 credit hours for the non-thesis option must be earned through courses taken for grade (i.e., not counting toward the 24 credits are GEOG 5004: *Current Geographic Research*, GEOG 5974: *Independent Study*, and GEOG 5904: *Project and Report*/GEOG 5994: *Research and Thesis*, which are graded as pass/fail). (2) Up to six credit hours total can come from 4000-level (post-undergraduate) courses, if approved by the faculty advisor and the thesis/project committee members, and if a 5000-level version of the same course does not exist. (3) Up to six credit hours total can come from the set of courses GEOG 5974 (*Independent Study*), GEOG 5984 (*Special Study*), and GEOG 6984 (*Special Study*) (taken for grade to count toward the 24 (thesis) or 27 (non-thesis) graded credits).

The Graduate School requires training in ethics and in diversity, equity, and inclusion. These requirements are met by successfully completing GEOG 5014 and GEOG 5004, typically during the first fall semester of enrollment in the graduate program.

Assistantships

The Department of Geography regularly allocates funding to support an array of Teaching Assistantships (TA) that are awarded competitively. Each TA includes tuition remission and an academic year stipend for a duration of two years, pending sufficient progress toward degree through year one. Also administered by the department are Research Assistantships (RA), which are funded by individual faculty research programs and may involve benefits and durations that differ from those of the TA. Any assistantship requires the student to carry 12 course credits during each semester of the assistantship. Students in the Accelerated Master of Science degree program are ineligible for a graduate-level TA or RA during the year of overlapping undergraduate-graduate study. All Teaching Assistantships require a one-time completion of GRAD 5004: *Graduate Teaching Assistant Workshop* (1 credit), which is offered by the Graduate School at the start of each semester.

Supplemental Funding

The Department of Geography typically provides students in the degree program with an annual funding allocation to support conference participation and/or field work. Travel grants are also available from the College of Natural Resources and Environment, and from the University's Graduate Student Association through competitive application.

Facilities

Within the Department of Geography's space inside Wallace Hall is the Graduate Student Laboratory, Room 237. Typically, all in-program graduate students are afforded desk space, but priority lies first with students serving as teaching assistants, and second with students supported by research assistantships. All graduate students also have access to the department's computer laboratory, 101 Wallace Hall. Additional meeting and social spaces are available within the Graduate Life Center on campus.

Student Governance

The Geography Graduate Student Alliance (GGSA) provides a self-governing structure for students in the program. One-year terms for President, Treasurer, Academic Chair, and Social Chair are filled at the beginning of the nine-month academic year, as are one-year terms for one Representative to the Graduate and Professional Student Senate, one Representative to the Department of Geography Faculty Assembly, and one Representative to both the Department's Diversity Equity and Inclusion Committee and the College's Faculty Association Diversity Committee.

Annual Awards

Each year, the Department recognizes students from within the program with single awards for Outstanding Graduate Student and Outstanding Graduate Teaching Assistant. Nominations for the awards are submitted by Department of Geography faculty, while the Department's Graduate Program Committee selects recipients after review, deliberation, and vote. Recipients are subsequently nominated by the Graduate Program Committee for the college-level award of the same type.

Task-Based Timeline

While the degree program is generally straightforward – 31 credit hours completed over two years – sequencing, progression, and deadlines are important. The idealized timelines below – one for Fall

semester program entry, and one for Spring semester entry – serves as a guide for successfully navigating a typical two-year program.

FALL SEMESTER PROGRAM ENTRY	
YEAR 1	
Semester 1 (Fall)	
Courses¹	GRAD 5004: Graduate Teaching Assistant Workshop (1 credit) (<i>required for new TAs</i>) GEOG 5014: Geographic Theory and Research (3 credits) (<i>required</i>) GEOG 5004: Geography Colloquium (1 credit) (<i>required</i>)
Activities	Plan program of study (<i>required</i>) Identify a thesis/project topic; literature review/questions/hypotheses (<i>recommended</i>) Form a thesis/project committee (<i>required</i>)
Forms	Plan of Study (<i>required, end of semester</i>) Student Appraisal (<i>required, end of semester</i>)
Semester 2 (Spring)	
Courses¹	GEOG 5004: Geography Colloquium (1 credit) (recommended but not required)
Activities	Develop thesis/project topic; refine literature review/questions/hypotheses (<i>recommended</i>) Develop thesis/project proposal (<i>recommended</i>) Initiate thesis/project research (<i>recommended</i>) Defend thesis/project proposal (recommended)
Forms	Student Appraisal (<i>required, end of semester</i>) Thesis/Project Research Proposal Approval (<i>recommended</i>)
Summer Thesis/Project Research Work	
YEAR 2	
Semester 3 (Fall)	
Courses¹	GEOG 5004: Geography Colloquium (1 credit) (required once during degree program) GEOG 5994: Research and Thesis/GEOG 5904: Project and Report (3+ credits) (recommended)
Activities	Thesis/project research: conclude analytical elements and begin writing
Forms	Thesis/Project Research Proposal Approval (<i>required, beginning of semester</i>) Student Appraisal (<i>required, end of semester</i>)
Semester 4 (Spring)	
Courses¹	GEOG 5004: Geography Colloquium (1 credit) (recommended but not required) GEOG 5994: Research and Thesis/GEOG 5904: Project and Report (3+ credits) (recommended)
Activities	Write thesis/project report Apply to graduate ² (via HokieSpa) (<i>required by March 1</i>) Complete thesis/project report; distribute to committee members (recommended by April 1) <u>Thesis option:</u> Schedule thesis defense: room (Department), date (Graduate School) (<i>required</i>) Authenticate thesis - Graduate School access to iThenticate (<i>required</i>) Submit electronic thesis via Electronic Submission System (ESS) (<i>required</i>) Defend thesis ² ("final exam") (recommended by May 1) (<i>required</i> by last day of final exams) Submit thesis to Graduate School (<i>required</i> within two weeks of defense)
Forms	All electronic submissions via Graduate School's ESS (<i>required</i> of advisor and committee)

¹A logical approach is to pursue a heavier course load during year 1 (semesters 1 and 2) so to allow greater time for research and thesis/project preparation in year 2.

²For Summer graduation, the deadline to apply for degree in HokieSpa is August 1 and the thesis defense deadline is the last day of final exams for Summer Session II.

SPRING SEMESTER PROGRAM ENTRY YEAR 1	
Semester 1 (Spring)	
Courses¹	GRAD 5004: Graduate Teaching Assistant Workshop (1 credit) (<i>required for new TAs</i>) GEOG 5004: Geography Colloquium (1 credit) (recommended but not required)
Activities	Plan program of study (<i>required</i>) Identify a thesis/project topic; literature review/questions/hypotheses (<i>recommended</i>) Form a thesis/project committee (<i>required</i>)
Forms	Plan of Study (<i>required, end of semester</i>) Student Appraisal (<i>required, end of semester</i>)
Summer Thesis/Project Research Work	
Semester 2 (Fall)	
Courses¹	GEOG 5014: Geographic Theory and Research (3 credits) (<i>required</i>) GEOG 5004: Geography Colloquium (1 credit) (<i>required</i>)
Activities	Develop thesis/project topic; refine literature review/questions/hypotheses (<i>recommended</i>) Develop thesis/project proposal (<i>recommended</i>) Initiate thesis/project research (<i>recommended</i>) Defend thesis/project proposal (<i>recommended</i>)
Forms	Student Appraisal (<i>required, end of semester</i>) Thesis/Project Research Proposal Approval (<i>recommended</i>)
YEAR 2	
Semester 3 (Spring)	
Courses¹	GEOG 5004: Geography Colloquium (1 credit) (recommended but not required) GEOG 5994: Research and Thesis/GEOG 5904: Project and Report (3+ credits) (recommended)
Activities	Thesis/project research: conclude analytical elements and begin writing
Forms	Thesis/Project Research Proposal Approval (<i>required, beginning of semester</i>) Student Appraisal (<i>required, end of semester</i>)
Summer Thesis/Project Research Work	
Semester 4 (Fall)	
Courses¹	GEOG 5004: Geography Colloquium (1 credit) (required once during degree program) GEOG 5994: Research and Thesis/GEOG 5904: Project and Report (3+ credits) (recommended)
Activities	Write thesis/project report Apply to graduate (via HokieSpa) (<i>required by November 1</i>) Complete thesis/project report; distribute to committee members (recommended by November 1) <u>Thesis option:</u> Schedule thesis defense: room (Department), date (Graduate School) (<i>required</i>) Authenticate thesis - Graduate School access to iThenticate (<i>required</i>) Submit electronic thesis via Electronic Submission System (ESS) (<i>required</i>) Defend thesis ("final exam") (recommended by December 1) (<i>required</i> by last day of final exams) Submit thesis to Graduate School (<i>required</i> within two weeks of defense)
Forms	All electronic submissions via Graduate School's ESS (<i>required</i> of advisor and committee)

¹A logical approach is to pursue a heavier course load during year 1 (semesters 1 and 2) so to allow greater time for research and thesis/project preparation in year 2.

Human Resources

Graduate Program Director	Dr. Robert Oliver, 203 Wallace Hall, oliverr@vt.edu
Graduate Program Coordinator	Ms. Karen Bland, 238 Wallace Hall, kbland@vt.edu
Department Head	Dr. Tom Crawford, 238 Wallace Hall, tomc3@vt.edu
Graduate Ombudsperson	Dr. Bryan Hanson, 120 Graduate Life Center, bryanh76@vt.edu
Information Technology	Mr. Les Fuller, 216 Cheatham Hall, fuller@vt.edu

Forms

The forms that follow are those required for progress to degree:

- 1- Plan of Study, Thesis Option
- 2- Plan of Study, Non-Thesis Option
- 3- Program Progress
- 4- Research Proposal Approval

Virginia Tech Department of Geography, Master of Science (M.S.) in Geography
Plan of Study – Thesis Option (Effective Spring 2025, CIP Code 30.4401)
Required – students entering Spring 2025 or later / Optional – students entering before Spring 2025

Name: _____ Student ID: _____

CORE COURSES – one course¹ must be either GEOG 5064 or GEOG 5354G, or substitute an appropriate methods course² approved by your advisor					
Semester	Year	Dept	Course #	Course Title	Credit Hours
Fall		GEOG	5014	Geographic Theory & Research	3
Fall		GEOG	5004	Current Geographic Research	1
		GEOG	5034	Analysis of Spatial Data	3
		GEOG	5164G	Adv Qual Methods & Ethics in Geog	3
		GEOG			3
Total Core Hours					13

GEOGRAPHY COURSES – minimum 6 credit hours²					
Semester	Year	Dept	Course #	Course Title	Credit Hours
		GEOG			
		GEOG			
		GEOG			
		GEOG			
		GEOG			
Total Geography Hours					

COGNATE COURSES – minimum 3 non-geography credit hours²					
Semester	Year	Dept	Course #	Course Title	Credit Hours
Total Cognate Hours					

RESEARCH & THESIS – minimum 6 hours; only 6 hours should be listed but you may take more					
Semester	Year	Dept	Course #	Course Title	Credit Hours
		GEOG	5994	Research & Thesis	
		GEOG	5994	Research & Thesis	
		GEOG	5994	Research & Thesis	
		GEOG	5994	Research & Thesis	
Total Research & Thesis Hours					6

TOTAL PROGRAM HOURS (Minimum required = 31)					
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¹ Core methods course titles: GEOG 5064 Elements of GIS GEOG 5354G Advanced Remote Sensing

² Up to 6 credit hours on this Plan of Study can be 4000-level (post-undergraduate) WITH COMMITTEE APPROVAL.
Up to 6 credits TOTAL can come from 5974 (Independent Study), 5984 (Special Study), and 6984 (Special Study).

TOTAL CREDIT HOURS REQUIRED = 31; 24 of which must be from *graded* coursework – GEOG 5004, GEOG 5974, and GEOG 5994 NOT included in total of 24

Summary (graded courses in bold):

- 1 credit: GEOG 5004 (Fall semester offering)
- **9 credits: GEOG 5014, GEOG 5034, GEOG 5164G**
- **3 credits: GEOG 5064 or GEOG 5354G**
- **6 credits: geography courses (GEOG)**
- **3 credits: non-geography courses**
- 6 credits: GEOG 5994 (Research & Thesis)

Remaining **3 credits** from an appropriate **graded course** selected in consultation with your advisor.

The Graduate School's ethics requirement is met by completing GEOG 5014 (required) and completing GEOG 5004 during the Fall semester (required).

The Graduate School's inclusion and diversity requirement is met via mandatory orientation, mandatory syllabus statements, and by completing GEOG 5004 during the Fall semester (required).

SIGNATURES				
	Name	Signature	VT ID #	Date
Student				
Advisor				
Co-advisor				
Committee Member				
Committee Member				
Committee Member				
Director of Graduate Studies				

Deadline: End of first semester unless negotiated with Advisor & Graduate Committee Chair due to extenuating circumstances

Virginia Tech Department of Geography, Master of Science (M.S.) in Geography
Plan of Study – Non-Thesis Option (Effective Spring 2025, CIP Code 30.4401)
Required – students entering Spring 2025 or later / Optional – students entering before Spring 2025

Name: _____ Student ID: _____

CORE COURSES – one course¹ must be either GEOG 5064 or GEOG 5354G, or substitute an appropriate methods course² approved by your advisor					
Semester	Year	Dept	Course #	Course Title	Credit Hours
Fall		GEOG	5014	Geographic Theory & Research	3
Fall		GEOG	5004	Current Geographic Research	1
		GEOG	5034	Analysis of Spatial Data	3
		GEOG	5164G	Adv Qual Methods & Ethics in Geog	3
		GEOG			3
Total Core Hours					13

GEOGRAPHY COURSES – minimum 6 credit hours²					
Semester	Year	Dept	Course #	Course Title	Credit Hours
		GEOG			
		GEOG			
		GEOG			
		GEOG			
		GEOG			
Total Geography Hours					

COGNATE COURSES – minimum 3 non-geography credit hours²					
Semester	Year	Dept	Course #	Course Title	Credit Hours
Total Cognate Hours					

PROJECT & REPORT – minimum 3 hours; only 3 hours should be listed but you may take more					
Semester	Year	Dept	Course #	Course Title	Credit Hours
		GEOG	5904	Project & Report	
		GEOG	5904	Project & Report	
		GEOG	5904	Project & Report	
		GEOG	5904	Project & Report	
Total Project & Report Hours					3

TOTAL PROGRAM HOURS (Minimum required=31)					
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¹ Core methods course titles: GEOG 5064 Elements of GIS GEOG 5354G Advanced Remote Sensing

² Up to 6 credit hours on this Plan of Study can be 4000-level (post-undergraduate) WITH COMMITTEE APPROVAL.
Up to 6 credits TOTAL can come from 5974 (Independent Study), 5984 (Special Study), and 6984 (Special Study).

TOTAL CREDIT HOURS REQUIRED = 31; 27 of which must be from *graded* coursework – GEOG 5004, GEOG 5904, and GEOG 5974 NOT included in total of 27

Summary (graded courses in bold):

- 1 credit: GEOG 5004 (Fall semester offering)
- **9 credits: GEOG 5014, GEOG 5034, GEOG 5164G**
- **3 credits: GEOG 5064 or GEOG 5354G**
- **6 credits: geography courses (GEOG)**
- **3 credits: non-geography courses**
- 3 credits: GEOG 5904 (Project & Report)

Remaining **6 credits** from appropriate **graded courses** selected in consultation with your advisor.

The Graduate School's ethics requirement is met by completing GEOG 5014 (required) and completing GEOG 5004 during the Fall semester (required).

The Graduate School's inclusion and diversity requirement is met via mandatory orientation, mandatory syllabus statements, and by completing GEOG 5004 during the Fall semester (required).

SIGNATURES				
	Name	Signature	VT ID #	Date
Student				
Advisor				
Co-advisor				
Committee Member				
Committee Member				
Committee Member				
Director of Graduate Studies				

Deadline: End of first semester unless negotiated with Advisor & Graduate Committee Chair due to extenuating circumstances

Virginia Tech Department of Geography
Graduate Student Progress Appraisal

Student: _____ Date: _____

Cumulative GPA _____ as of _____ (Date) Expected Graduation Date: _____

To the Student: Complete this form at the end of each semester. First complete the self-appraisal (page 2), then ask your GTA/GRA supervisor(s) to complete their section, and finally have your advisor complete the form.

To the Faculty: You must discuss performance with the student in any cases of below "Good" performance.

Deadline: End of every semester other than semester in which you graduate (submit completed form to Karen Bland in 238 Wallace Hall or at kbland@vt.edu)

Advisor & GTA/GRA Supervisor Appraisal of Student Performance

Academic: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

Comments:

Research Progress: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

Comments:

Professional Activities: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

Comments:

Assistantship Duties: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

Comments:

Advisor Signatures:

GTA/GRA Advisor(s) _____ Date: _____

Major Advisor _____ Date: _____

Student Self-Appraisal of Performance

Assess your performance in the following areas. Comment on your accomplishments, activities, and areas of concern in each category—be sincere, but self-advocating. If you rate yourself below “Good” in any category, plan to meet with your advisor to discuss ways to improve your performance.

Academic: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

(Relates to coursework and grades.)

Comments:

Research Progress: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

(Examples: Plan of Study filed, proposal written/approved, research progress such as literature review, data collection/analysis.)

Comments:

Professional Development: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

(Examples: Attendance/presentations at professional meetings, lectures delivered to classes or other groups, workshops attended, internships, participation in graduate student organizations, service to the department and university, outreach activities.)

Comments:

Assistantship Duties: Excellent _____ Good _____ Needs Improvement _____ Unsatisfactory _____

(How did you perform overall, did you meet deadlines, tasks performed, lectures or labs delivered, curriculum developed, barriers confronted, general feedback on the experience. (contact the Graduate Director if you wish to keep private)

Comments:

Student Signature:

Date:

**VIRGINIA TECH DEPARTMENT OF GEOGRAPHY
GRADUATE STUDENT RESEARCH PROPOSAL APPROVAL FORM**

Student Name: _____

Expected Graduation Date: _____

Proposal Title: _____

As thesis/project committee members, we have read and approved the research proposal. This authorizes the student to complete the proposed research as required for the Master of Science degree in Geography within the Department of Geography at Virginia Tech.

Advisor

Date

Co-Advisor

Date

Committee Member

Date

Committee Member

Date

Committee Member

Date

Student

Date

Deadline: First day of classes of third semester in the program