

**BONAFIDE ACADEMIC REQUIREMENTS
FOR THE DEPARTMENT OF GEOLOGICAL SCIENCES**

The Department of Geological Sciences has identified the following Bonfide Academic Requirements (BFAR) as the core academic requirements that a graduate student must acquire in order to gain and demonstration acquisition of essential knowledge and skills.

Students must meet the following requirements in addition to meeting those set by the Faculty of Graduate Studies (FGS). Please refer to the FGS Academic Guide for further information.

	BFAR STATEMENT	RATIONALE	TAUGHT	ASSESSED
1	Students must successfully complete a thesis proposal in the field of geological sciences, at a level commensurate with the degree sought.	Demonstrates essential knowledge and understanding to begin thesis research; research competence is essential for a geoscientist.	Self-study for thesis proposal, with guidance from advisory committee.	Advisory Committee.
2	Students in a doctoral program must pass a candidacy examination, testing depth and breadth of knowledge in geological sciences.	Demonstrates essential knowledge and understanding at the doctoral level; depth and breadth of knowledge are essential for a doctoral-level geoscientist.	Self-study for doctoral candidacy exam, with guidance from advisory committee (GRAD 8010).	Examining Committee (GRAD 8010).
3	Students must produce a recorded/published thesis in the field of geological sciences, commensurate with the degree sought.	Demonstrates essential knowledge, skills, and abilities necessary to conduct and complete research; research competence is essential for a geoscientist.	Master's thesis research, with guidance from advisory committee (GRAD 7000). Doctoral thesis research, with guidance from advisory committee (GRAD 8000).	Examining Committee (GRAD 7000). Examining committee (GRAD 8000).
4	Students must successfully defend their thesis in the field of geological sciences, in real time.	Demonstrates essential knowledge, skills, and abilities necessary to conduct and complete research; research competence is essential for a geoscientist.	Master's thesis research, with guidance from advisory committee (GRAD 7000). Doctoral thesis research, with guidance from advisory committee (GRAD 8000).	Examining committee (GRAD 7000). Examining committee (GRAD 8000).

	BFAR STATEMENT	RATIONALE	TAUGHT	ASSESSED
5	Students must demonstrate knowledge, skills, and abilities essential to geological sciences at a level commensurate with the degree sought.	Demonstrates knowledge, skills, and abilities necessary for completion of program and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory Committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
6	Students must demonstrate a thorough understanding of a substantial body of knowledge that is at the forefront of geological sciences, at a level commensurate with the degree sought.	Demonstrates essential knowledge and understanding necessary for completion of program and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory Committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
7	Students must demonstrate a critical awareness of current problems and new insights at the forefront of geological sciences.	Demonstrates essential knowledge necessary for completion of program and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory Committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
8	Students must demonstrate a working comprehension of how established techniques of inquiry are used to interpret knowledge in geological sciences.	Demonstrates essential skills and abilities necessary for completion of program and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory Committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).

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9	Students must achieve and demonstrate overall competence in geological methodologies relating to research design, data collection and management, analysis, and result interpretation, at a level commensurate with the degree sought.	Demonstrates essential skills and abilities necessary for research and completion of program, and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory Committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
10	Students must generate, document, and interpret data through observation and analysis of materials and phenomena related to geological sciences.	Demonstrates essential skills and abilities necessary for research; research competence is essential for a geoscientist.	Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). GEOL 7760 and other courses approved for student's program.	Examining committee (GRAD 7000). Examining committee (GRAD 8000). Course instructors (GEOL 7760 and other courses approved for student's program).
11	Students must demonstrate geological problem-solving skills including identifying problems, evaluating possible outcomes, selecting appropriate solutions, and providing logical rationales to support the selection at a level commensurate with the degree sought.	Demonstrates essential skills necessary for research and completion of program, and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
12	Students must demonstrate the ability to understand and use applicable techniques for scientific inquiry, research, and effective communication as appropriate to geological sciences, at a level commensurate with the degree sought.	Demonstrates essential abilities necessary for research and communication, and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).

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13	Students must demonstrate the skills to apply scientific theory, models, and evidence to geological problems and data at a level commensurate with the degree sought.	Demonstrates essential skills necessary for research and completion of program, and success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
14	Students must demonstrate the ability to undertake and produce original geological research, advanced scholarship, and independent investigation at a level commensurate with the degree sought.	Demonstrates essential abilities necessary for research; research competence is essential for a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000).	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000).
15	Students must develop and support a sustained argument in a well-presented form as appropriate to geological sciences, at a level commensurate with the degree sought.	Demonstrates essential skills and abilities necessary for effective communication and completion of program; essential for success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010).	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010).
16	Students must design and deliver appropriate presentations that provide, discuss and defend geological information in a clear and effective manner.	Demonstrates essential skills and abilities necessary for effective communication and completion of program; essential for success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).

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17	Students must collaborate in group interactions with their peers, course instructors, advisor(s), advisory committee, examining committee, and members of the public throughout their program in geological sciences.	Demonstrates essential skills and abilities necessary for effective communication and completion of program; essential for success as a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000). Doctoral candidacy exam (GRAD 8010). GEOL 7760 and other courses approved for student's program.	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000). Examining committee (GRAD 8010). Course instructors (GEOL 7760 and other courses approved for student's program).
18	Students must conduct geological research in a safe and ethical manner.	Demonstrates essential professionalism necessary for research; research competence is essential for a geoscientist.	Thesis proposal. Master's thesis (GRAD 7000). Doctoral thesis (GRAD 8000).	Advisory committee. Examining committee (GRAD 7000). Examining committee (GRAD 8000).