IOWA STATE UNIVERSITY

College of Liberal Arts and Sciences

Ivy College of Business

Proposal for a Geology/MBA Concurrent Degree

1. Name of the programs or majors

Geology

Business Administration

1. Name of the degrees

Bachelor of Science in Geology

Master of Business Administration

3. Name of the department(s) which administer(s) the program

Department of Geological & Atmospheric Sciences, College of Liberal Arts and Sciences

Department of Business Administration, Ivy College of Business

4. Rationale for the concurrent degree program

The American Geosciences Institute (AGI) estimates a shortage of 135,000 geoscientists by the year 2022. This estimate comes from the number of current geoscientists reaching retirement age and the growing demand for geoscientists across many fields to understand and address solutions for both climate change and the safe development of energy and natural resources. The Bureau of Labor Statistics predicts a 10% growth in geoscience jobs between 2014 and 2024 compared to 7% across all occupations (Bureau of Labor Statistics, 2015). Approximately 6,000 people earn a BS degree in a geoscience field each year (National Science Board, 2016); hence to meet future demands for geoscientists, we need a more intentional focus on attracting, supporting, and training new geology students.

A concurrent MBA degree has the potential to attract high-caliber students to the geology program. Geology majors interested in management careers in the geosciences profession will benefit from earning the MBA while still at Iowa State instead of later interrupting their careers to pursue the advanced business degree. The MBA will help prepare geology students for long-term career success in industry (e.g., oil and gas), both as a uniquely qualified employee or as an independent consultant.

5. Admission procedures and requirements

The Geology/MBA concurrent degree is a rigorous 5-year program, and admission is selective. Candidates are expected to exhibit superior intellectual ability, strong leadership attributes, and must be highly motivated and career-focused. Significant internship/coop experience is expected.

Geology students interested in the concurrent degree program must apply to the MBA no later than July 1 the summer prior to their senior year. MBA admission is only considered for fall semester entry.

The following application materials are required:

* Application for an ISU Undergraduate Student Wishing to Pursue a Concurrent Graduate Degree
* Official transcripts
* GMAT (preferred) or GRE scores
* Letters of recommendation (2)
* Essays (2)
* Resume
* Admissions interview (by invitation only)

6. Requirements of the program

Degree requirements for the BS in geology and the MBA are unchanged in the proposed Geology/MBA concurrent degree. The BS in geology and the MBA require a minimum of 120 credit hours and 48 credit hours respectively. A maximum of twelve approved credit hours may be applied toward both the BS and MBA degrees.

7. Expected enrollment

2-3 students per year.

8. If not already addressed, answer the following:

a. How will the undergraduate degree plan and graduate program of study be developed?

Geology students will work with the both their undergraduate advisor and the MBA academic advisor to develop a program of study for the Geology/MBA.

b. When will the student have a major professor?

Upon entry to the Geology/MBA concurrent degree (i.e., fall semester of senior year)

c. Will graduate assistantships be provided?

Students will be eligible for a graduate assistantship; however assistantships are highly competitive and not guaranteed. The Ivy College of Business offers merit-based scholarships to exceptional concurrent MBA students in the various STEM majors.

d. Will a thesis be required?

The Master of Business Administration is a coursework-only degree.

e. Who will be responsible for the administration of the program?

Cinzia Cervato, Morrill Professor of Geological & Atmospheric Sciences, 224 Science I,

[cinzia@iastate.edu](mailto:cinzia@iastate.edu), 294-7583

Jacquelyn Rees Ulmer, Associate Dean for Professional Masters Programs, 2205 Gerdin, [jrulmer@iastatate.edu](mailto:jrulmer@iastatate.edu), 294-6232

f. How much time is required to complete the program? Show a sample semester-by-semester plan.

The Geology/MBA concurrent degree program is designed to be completed in a minimum of five academic years or ten semesters. In the first three years, geology students take their prescribed course requirements. The final two years are comprised of the remaining geology major coursework and the MBA program requirements.

g. Will students be allowed to double count credits? If so, how many?

Twelve credits.

9. Attach memos showing approval by appropriate department and college committees, faculty, and administrators.

10. Proposal Contact

Cinzia Cervato, Morrill Professor of Geological & Atmospheric Sciences, 224 Science I,

[cinzia@iastate.edu](mailto:cinzia@iastate.edu), 294-7583

Jacquelyn Rees Ulmer, Associate Dean for Professional Masters Programs, 2205 Gerdin, [jrulmer@iastatate.edu](mailto:jrulmer@iastatate.edu), 294-6232

BS in Geology/MBA Sample Study Plan (2018 Catalog)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Degrees | Semester 1 | Semester 2 | Semester 3 | Semester 4 | Semester 5 | Semester 6 | Semester 7 | Semester 8 | Semester 9 | Semester 10 |
| BS in Geology  120 credits  (minimum) | ENGL 150  Crit. Thinking  3 cr. | A & H  Choice  3 cr. | ENGL 250  WOVE  3 cr. | A & H  Choice  3 cr. | A & H  Choice  3 cr. | Social Science  Choice  3 cr. | GEOL 479  Surficial Process  3 cr. | Geology  Choice  3 cr, | Elective  Course  3 cr. | A & H  Choice  3 cr. |
|  | GEOL 100 & L  The Earth  4 cr. | GEOL 102 & L  Earth History  4 cr. | GEOL 315 & L  Mineralogy  4 cr. | GEOL 365  Petrology  3 cr. | GEOL 368  Sediment. Geol.  4 cr. | GEOL 356  Struct. Geol.  4 cr. |  |  | Geology  Choice  3 cr, |  |
|  | CHEM 177 & L  Chemistry I  5 cr. | CHEM 178 & L  Chemistry II  4 cr. | GEOL 316  Optical Min.  2 cr. | Elective  Course  3 -4 cr. | ENGL 309 or  ENGL 314  3 cr. | Geology  Choice  3 cr, |  |  |  |  |
|  | MATH 165  Calculus I  4 cr. | MATH 166  Calculus II  4 cr. | PHYS 111  Gen. Physics  5 cr. | PHYS 112  Gen. Physics  5 cr. | Foreign Lang./  Elective  3 cr. | Foreign Lang./  Elective  3 cr. |  |  |  |  |
|  | GEOL 112 Earth Wind & Fire LC 1 cr. | GEOL 113 Earth Wind & Fire LC 1 cr. | Sci./Eng./Math  Choice  3 cr. | Sci./Eng./Math  Choice  3 cr. | Social Science  Choice  3 cr. | GEOL 302  Field Studies  6 cr. (summer) |  |  |  |  |
|  |  |  | LIB 160  Info. Literacy  1 cr. |  |  |  |  |  |  |  |
| MBA  48 credits  (minimum) |  |  |  |  |  |  | BUSAD 502 Quant. Analy.  3 cr | FIN 501  Finance  3 cr | MGMT 503  Bus & Society  3 cr (Elective) | MBA  Elective  3 cr |
|  |  |  |  |  |  |  | ACCT 501  Accounting  3 cr | MKT 501  Marketing  3 cr | MGMT 504  Strategy  3 cr | MBA  Elective  3 cr |
|  |  |  |  |  |  |  | ECON 532  Economics 3 cr.  (Soc. Sci. Choice) | SCM 501  SCM  3 cr | MBA  Elective  3 cr | MBA  Elective  3 cr |
|  |  |  |  |  |  |  | MGMT 502  Org. Behavior  3 cr | MIS 501  MIS  3 cr |  |  |
|  |  |  |  |  |  |  | BUSAD 592  Prof Skills I  R cr | BUSAD 594  Prof Skills II  R cr |  |  |
| BS Geology 120 cr. | 17 cr. | 16 cr. | 18 cr. | 17 cr. | 16 cr. | 19 cr. | 6 cr. | 3 cr. | 9 cr. | 3 cr. |
| MBA 48 cr. |  |  |  |  |  |  | 12 cr. | 15 cr. | 12 cr. | 9 cr. |
| Shared Credits (12) |  |  |  |  |  |  | (3 cr.) | (3 cr.) | (6 cr.) |  |
| Total 160 cr. (min.) | 17 cr. | 16 cr. | 18 cr. | 17 cr. | 16 cr. | 19 cr. | 15 cr. | 15 cr. | 15 cr. | 12 cr. |

*Notes:*

Twelve acceptable credits may be applied to both the BS in Geology and the MBA. The twelve “shared” elective credits ECON 532 (Social Science Choice, MGMT 503 Elective Course and two Geology Choice courses (6 credits) approved for the Geology/MBA concurrent degree program including, but not limited, to GEOL 324, GEOL 444, GEOL 452, GEOL 457, GEOL 488, and GEOL 490 (depending upon topic).

ECON 101 is recommended, but not required, as a Social Sciences choice course as a prerequisite to ECON 532 in the MBA program. Instructor permission to waive ECON 101 prerequisite.

Twelve credits of MBA electives must be 500 level courses from the Ivy College of Business.