LSC # 141
Action 7-12-93

COVER SHEET: Request for Approval to Use W-Designation

TYPE I. PROFESSOR COMMITMENT
(✓) Professor FRANK W. HALL Phone 2379
(✓) Writing Workshop? (If not at IUP, where? when? _____
(✓) Proposal for one W-course (see instructions below)
(✓) Agree to forward syllabi for subsequently offered W-courses?

TYPE II. DEPARTMENT COURSE
( ) Department Contact Person _____ Phone _____
( ) Course Number/Title _____
( ) Statement concerning departmental responsibility
( ) Proposal for this W-course (see instructions below)

TYPE III. SPECIFIC COURSE AND SPECIFIC PROFESSOR(S)
( ) Professor(s) _____ Phone _____
( ) Course Number/Title _____
( ) Proposal for this W-course (see instructions below)

SIGNATURES:

Professor(s) FWHall

Department Chairperson FWHall

College Dean William T. Cale

Director of Liberal Studies Darlene S. Richardson

COMPONENTS OF A PROPOSAL FOR A WRITING-INTENSIVE COURSE:

I. "Writing Summary"--one or two pages explaining how writing is used in the course. First, explain any distinctive characteristics of the content or students which would help the Liberal Studies Committee understand your summary. Second, list and explain the types of writing activities; be especially careful to explain (1) what each writing activity is intended to accomplish as well as the (2) amount of writing, (3) frequency and number of assignments, and (4) whether there are opportunities for revision. If the activity is to be graded, indicate (5) evaluation standards and (6) percentage contribution to the student's final grade.

II. Copy of the course syllabus.

III. Two or three samples of assignment sheets, instructions, or criteria concerning writing that are given to students. Limit: 4 pages. (Single copies of longer items, if essential to the proposal, may be submitted to be passed among LSC members and returned to you.)

Please number all pages. Provide one copy to Liberal Studies Committee.

I. WRITING SUMMARY

GS 326 Field Geology

The course is designed for Geology and Environmental Geoscience majors or minors and is taught every other Spring semester, with an anticipated enrollment of 12 to 20 students per semester. Most students in the course are second semester juniors or seniors, but sometimes some sophomores enroll in it. It is primarily a "hands-on" course involving actual geological field projects in an area (about 3 square miles) in western/central Pennsylvania. Field and writing techniques and exercises are introduced in the classroom, and then applied in the field. By synthesizing the field and writing exercises as the course evolves, the student completes a final geologic map, cross sections, and written field report.

WRITING ACTIVITIES

1. Rough Draft of Introductory Material of Report, Including Literature Search. (approx. 10 typed pages; 9% of grade)

   Inclement weather generally inhibits actual geologic field work early in the semester, however students can begin a literature search and report outline early and immediately write the introductory material on the purpose, methods, location and accessibility, previous work, regional geologic setting, and parts of the front matter (title page, table of contents, list of illustrations) and references cited. This draft will be exchanged and reviewed by the students in class (1% of grade for participation). I will then collect, critically review and grade them, then return them for revision and incorporation in the final report. This exercise will not only introduce research and writing skills early in the semester, producing a foundation for later activities, but it will also constitute a major step in the progress of writing the final report, thus helping to alleviate the students' natural tendency to procrastinate on a major writing project.

2. Field Journal (approx. 10-15 neatly printed pages, in pencil; 10% of grade)

   Examples and techniques of field note-taking and sketching will be introduced in class then applied in the field. The students record all field observations in a journal that evolves as the course proceeds and which forms the basis for the geologic map and main sections of the report.

   At four regular intervals the students will exchange and review each others' journals in class (total of 4% of grade for participation) and we will discuss ideas for improvement. The final, completed field journal will be turned in at the last class for grading by me.

3. Rough Draft of Measured and Described Stratigraphic Section and Column (approx. 3 typed pages; 10% of grade)

The techniques of how to measure and describe a section and draft a column will be covered in class, then applied in the field. This project provides the students a detailed study of the stratigraphy of the field area, producing a firm foundation for later field mapping and writing activities. This draft will be exchanged and reviewed by the students in class (1% of grade for participation) by mid-term, collected for critical review and grading by me, then returned for revision and incorporation in the final report as an appendix.

4. Rough Draft of Main Sections and Remainder of Report (15-25 typed pages; 20% of grade)

As field work progresses, the students can begin to write the sections on geomorphology and economic geology and begin to block out the main sections of the report which involve the stratigraphy and structures of the area. The structural geology section is based largely on the developing geologic map and cross sections, hence is written near the end of the project, as are the parts on geologic history, remaining references cited, and the abstract. This draft will be collected, critically reviewed and graded by me, then returned to them. It is given considerable weight to encourage students to submit the best possible report the first time, rather than tempt them to submit a very poor rough draft in the hope that my considerable editing will do much of the work for them on the final report.

5. Final, Completed Report (25-35 typed pages; 20% of grade) The final, smooth, completed report will be turned in at the end of the semester. Since it should include revisions suggested by previous critical reviews and be quite professional, it should involve considerable effort, and therefore is weighted fairly heavily. It should be noted that the writing aspects of the course account for 69% of the grade, and class participation (peer reviews) account for 6%. The geologic map and cross sections, the central part of a field mapping project, account for the remaining 25%. These are labeled as a plate, and are folded to fit in a pocket on the inside back cover of the report.

II. COURSE SYLLABUS

GS 326 Field Geology
Dr. Frank W. Hall
Walsh 113 Ph. 357-2379 Office Hours: dependent on semester schedule

Required Text: Compton, R.R., 1985, Geology In The Field, John Wiley and Sons, 398 p.

Catalog Description:

GS 326 Field Geology 2c-3l-3sh

Prerequisite: GS 325 Structural Geology

Principles and techniques of field geology with emphasis on developing field skills using Brunton compass, aerial photographs, topographic maps, altimeter, jacob staff, and rock color charts. Field projects involve techniques of field note-taking, measuring and describing stratigraphic sections, geologic field mapping and analysis, construction of geologic maps and structure sections, and report writing. Includes field trips which may occur on weekends.

Course Description:

The course is primarily a "hands-on" course designed to teach students the techniques of geologic field work and how to write geologic reports by doing actual geologic field projects similar to those that geologists and environmental geoscientists do in their jobs. Field and writing techniques and exercises are introduced in the classroom, and then applied in the field. Field transportation is provided by Geoscience Department vans, and field trips are taken on clement weather back-to-back lecture/labs days and some weekends. By synthesizing the field and writing exercises and incorporating reviews and ideas for improvement as the course progresses, the students complete a final, professional geologic map, cross sections, and written field report of approximately 25 to 35 typed pages (6000 to 8500 words).

Course Objectives:

The students will learn the skills to enable them to make competent observations and notes in the field, how to write a professional geological report, and how to compile geological observations and data to produce a geologic map, cross sections, and stratigraphic column.

Another goal is to train the students to competently use geologic field equipment such as the Brunton compass, aerial photographs, stereoscopes, rock color charts, altimeter, and measuring equipment.

In addition to developing field and writing-skill training, the students will also become familiar with the details of the geology of an area of the Pennsylvania thrust-fold belt, learning principles that may be applied to the geologic study of many other regions of the earth as well.

Outline of Course Topics

T lecture and R back-to-back lecture/lab scheduled for afternoons.

Lecture/Lab Topics	Text Chap. and/or pages
Introduction and scope of course.	Preface p. v-vii Chap. 1, p. 1-9
Basic Equipment and use.	Chap. 2, p. 10-21 Chap. 11, p. 229-232 App. 1, p. 363
Outline of report and literature search; writing and illustration techniques	Chap. 16, p. 341-362
Basic field procedures, note taking, compilation of the Field Journal	Chap. 3, p. 22-47
Field work with sedimentary rocks	Chap. 4; p. 48-61 Chap. 9, p. 162-163 App. 2-10, p. 364-379
Techniques of measuring and describing stratigraphic sections	Chap. 5, p. 83-86 Chap. 11, p. 222-241
Field mapping techniques	Chap. 5, p. 75-98 Chap. 6, p. 99-111
Use of aerial photographs and stereoscopes	Chap. 7, p. 112-134 Chap. 10, p. 197-221
Location of structure sections on geologic mapping project	Chap. 6, p. 108-111
Summary of the final field project and report	Chap. 16, p. 341-362

Field Trips:

Dates: weather conditions will determine the dates of the trips. Trips will be held on clement weather lecture/lab days and on some weekends.

Trip Objectives:

Learning the techniques of measuring and describing a stratigraphic section, and application to the actual section.

Several trips to continue measurement and description of the stratigraphic section.

Demonstration and practice of geologic mapping and field note-taking techniques.

Several trips involving geologic mapping of the area.

Trip to analyze structurally complex portion of the area.

Several trips involving geologic mapping to complete the mapping project.

Evaluation:

The course grade is based on the various projects, summarized on the following check sheet.

Grading Check Sheet For Projects. Grades are given on the basis of A = excellent, B = above average, C = average, D = below average, F = failure. The late penalty for projects is one letter grade per day late. Class peer reviews are checked off for: student participation = full credit, or lack thereof = zero credit.

% of Grade	Project
1. 6 %	Class participation as described below as class peer reviews.
2. 9 %	Rough draft of introductory material of report including literature search (Approx. 10 typed pages) Class peer review at 1/4 term: _____ (1%) Due at 1/4 term. Grade: _____
3. 10%	Field Journal (Approx 10-15 neatly printed pages in pencil) Class peer review 1.____ 2.____ 3.____ 4.____ (1% each) Final, completed journal due at the last class. Grade: _____
4. 10%	Rough draft of measured and described stratigraphic section and column (Approx. 3 typed pages) Class peer review at mid-term: _____ (1%) Due at mid term. Grade: _____
5. 20%	Rough draft of main sections and remainder of report (15-25 typed pages) Due 3 weeks prior to final exam date/time. Grade: _____
6. 20%	Final, completed report (25-35 typed pages) Due at final exam date/time. Grade: _____
7. 25%	Geologic map and cross sections Due at final exam date/time. Grade: _____

The terminating activity at the scheduled final exam date/time slot involves the turning in of the final, completed report, geologic map and cross sections and all Department equipment, and discussion of the course for ideas and insights on improvement.

III. SAMPLES OF WRITING ASSIGNMENT SHEETS/INSTRUCTIONS

GS 326 Field Geology

Rough Draft of Introductory Material, Including Literature Search
(Approx. 10 typed pages; 9% of grade)

This exercise will introduce research, organizational, and writing skills early in the semester, and will serve as a foundation for later writing activities as well as forming a major step in the progress of writing the final report. The following basic outline for this beginning part of the report should be used (also see your text p. 353-361):

Front Matter

Title page, with your name, course name, date
(Abstract - written near end of course)
Table of Contents
List of Illustrations

Introduction

Purpose
Methods (equipment and techniques used; later, number/dates of field days added).
Location. A small index map is helpful (e.g., can call it Figure 1.)
Accessibility (sometimes location and accessibility are combined under one heading)
Previous Published Geologic Work
Regional Geologic Setting (brief discussion of regional geologic aspects, such as the overall rock types and ages, and major regional structures - do not discuss the local, detailed geology here, that will be done under the main sections of the report)

References Cited

First, you should undertake a thorough literature search to obtain background for the sections on Previous Work and Regional Geologic Setting. Resources in the Geoscience Department, IUP library, and if feasible other university libraries should be used. The writing should be in current U.S. Geological Survey/Geological Society of America style. The Abstract is written near the end of the course, and only part of the Table of Contents, List of Illustrations, and References Cited can be written now. Grammar, spelling, adequate professional style and language, literature citations, and illustrations will be evaluated. Due for class peer review at 1/4 semester (1% of grade for participation). Draft will then be collected at the end of that class for grading, then returned for revision and incorporation in the final report.

GS 326 Field Geology

Field Journal (Approx. 10-15 neatly printed pages, in pencil; 10% of grade)

Techniques and examples of field note-taking, including making labeled field sketches, will be introduced in class. (Also see your text p. 27-30 for examples.) The field journal should be done on 8.5" x 11" sheets carried in your clipboard on all field trips, and all field observations made during the course, including the measured and described stratigraphic section and all outcrop/field mapping observations, should be recorded. The notes should be neatly printed in pencil. At four regular intervals the journals will be exchanged, reviewed and discussed by the students in class to obtain ideas and insights for improvements as the course proceeds. Participation at these peer reviews will be checked off (1% of grade for each review - see Syllabus Grading Check Sheet. The journal should improve as the course progresses, and the final, completed journal is due at the last class of the course.

GS 326 Field Geology

Rough Draft of Main Sections and Remainder of Report (15-25 typed pages; 20% of grade)

The main sections of the report are the Stratigraphy and Structural Geology sections. Writing of the Stratigraphy part can begin as soon as the stratigraphic section is measured and described and some geologic mapping has been completed. The geologic map and cross sections should be well underway before the Structural Geology section is written, as these form the foundation for that section. The sections on Geomorphology and Economic geology can begin as soon as some mapping is completed. The parts on Geologic History, remaining References Cited, Table of Contents and List of Illustrations and the Abstract should be written last. Suggestions on proper writing of the Abstract will be covered in class. As in the draft of the introductory material, criteria such as grammar, spelling, professional style and language, literature citations, and adequate illustrations will also be evaluated. It should be noted that the report should include not only your organization and synthesization of data and structures revealed during the study (fact), but also your interpretations of how the structures are related to each other and to the regional structures, and how they originated, i.e. the kinematics, dynamics, and tectonics involved (concept). These interpretation parts (e.g. Structural Relationships and Geologic History - see following outline) provide opportunities to demonstrate your originality and creativity, which will also be evaluated.

The following basic outline for this draft of the report should be used (also see your text p. 353-361):

Stratigraphy

Introductory statement
Describe older units first, then younger (follow the Principle of Superposition). For example:

SILURIAN SYSTEM
  Wills Creek Formation
  Tonoloway Formation

DEVONIAN SYSTEM
  Ridgeley Formation
  Onondaga Formation

Structural Geology

Introductory statement
Description of structures ("fact")
  Major folds
  Minor folds
  Major faults
  Minor faults
  Minor structures, including joints, gash fractures, cleavage, etc.
Structural relationships - including kinematics, dynamics, tectonics ("concept")

Geomorphology

Geologic History

Economic Geology

References Cited

Appendices

This draft is due 3 weeks prior to the final exam date/time. It will be critically reviewed, graded, and returned for revision and incorporation in the final report.

Student check list for aspects of the Report

	Rough Draft	Final Report
Style		
Grammar	_____	_____
Spelling	_____	_____
Adequate professional style and language	_____	_____
Proper literature citations	_____	_____
Adequate discussion and differentiation of various topics (enough headings and subheadings, etc.)	_____	_____
Separation of fact from concept (interp.), and originality/creativity	_____	_____
Length of report	_____	_____
Other	_____	_____
Illustrations (Figures, Plates, Tables)		
Proper placement and referral within text	_____	_____
Quality and correct labeling and description of sketches, photographs	_____	_____
Adequate number of illustrations	_____	_____
Front Matter - adequacy of :		
Title page	_____	_____
Abstract	_____	_____
Table of Contents	_____	_____
List of Illustrations	_____	_____
Quality Assessment of Sections		
Introduction	_____	_____
Stratigraphy	_____	_____
Structure	_____	_____
Geomorphology	_____	_____
Geologic History	_____	_____
Economic Geology	_____	_____
References Cited	_____	_____
Appendices	_____	_____