AHS 307 Fall 2015
Field Geology Syllabus & Schedule

CLASS MEETINGS: Wednesdays: 2:00 pm – 3:00 pm, WSB-22
Fridays: 2:00 pm – 5:00 pm Most Friday classes will be spent locally in the field - until we get frozen or snowed out! Note the schedule for the three extended weekend field trips. These trips are mandatory. This class finishes on the Wednesday before Thanksgiving (Wednesday 27th November).

LONG WEEKEND FIELD TRIPS: Northern Minnesota: September 11th – 13th
Southeastern Minnesota: September 25th – 27th
Southwestern Minnesota: October 16th – 18th

ROOM: WSB 22 & Field (meet near WSB loading dock/entrance to WSB addition)

INSTRUCTOR: Dr. Kate Pound Office: WSB 155
Office Phone 320-308-2014 (but 100% unreliable)
Email: kspound@stcloudstate.edu
Website: *OUT OF DATE - redesigned site still to go live*
Office Hours: Monday 1-4 pm, Wednesday 3-4 pm in ISELF 230, Thursday 8-11 am, or by appointment

OBJECTIVES / GOALS / ORGANIZATION:

The main goal of this course is for you to learn to think and communicate as an effective field geologist by (1) doing field geology and (2) effectively reporting the results of geologic field work. This will be done by working on field-based (i.e. messy) geologic problems in sediments and in igneous, metamorphic, and sedimentary rocks. In Wednesday classes we will do preparatory or background work for field work, as well as reviews of reports and techniques. On Fridays we will do field-based work, which will require field reports. There will be three extended field trips (Northern Minnesota, SE Minnesota, SW Minnesota), which will include short field exercises as well as some 'geo-tourist' stops. For Friday classes you will need to come prepared for field work – which means being dressed appropriately for the conditions, and having your field notebook, hand lens, sunscreen, water bottle etc. with you.

By the end of this course you should be able to:

*Use topographic maps to locate yourselves accurately, and interpret or predict the origin of landforms
*Produce a simple geologic map for an area of igneous rocks and sedimentary rocks or sediments
*Interpret the depositional history represented by a sedimentary section you have measured
*Produce a surficial geologic map and interpretation based on integrated aerial photo and field examination
*Communicate accurately and effectively field observations and interpretations in field reports
*Prepare a structural cross section based on field data
*Be able to effectively search the published literature and databases for information or data relating to a field problem, and effectively integrate the literature or data to introduce, solve, or help interpret the problem
*Plan a geological field investigation

In order to achieve these goals, we will concentrate on:

*Making geologic observations in the field (at localities that are accurately located on a map)
*Accurately recording your observations in the most appropriate and usable form
*Distinguishing between observations and inferences
*Integrating the observations to make general inferences or conclusions
*Inferring the processes and events that produced the features observed
*Writing up your findings in a style appropriate for professional geologic reports
*Critically evaluating field reports and the geological literature

WEBSITE: The URL for the EAS 307 website will be: **http://web.stcloudstate.edu/kspound/EAS_307.html**

NOTE – It is NOT UPDATED yet! I will let you know when it is live ….

D2L: Field trip details, handouts, and news items will be posted in D2L.

TEXTBOOK: There is one recommended (not required) text for this course. It is an excellent reference text that summarizes the terminology and knowledge used in all fields of the geosciences.

Geological Field Techniques, Angela L. Coe, (Editor), Wiley-Blackwell, 336 p., ISBN: 978-1-118-44508-2

ADDITIONAL REQUIRED FIELD EQUIPMENT/SUPPLIES:

Yellow 'Rite-in-the-rain' Geology Field Notebook – purchase from the AHS office ($20.00) – Please bring correct change.
Hand Lens – purchase from the AHS office (? $7.50 ?)
Sharp Pencil (mechanical pencils are best)
Colored Pencils
Eraser
Appropriate Field clothing and footwear, safety glasses, daypack (see attached Information Sheet)
Useful Items: Clipboard, Rock Hammer, Sharpie, collecting bags, safety glasses
Note Also: For the extended field trips you may need a sleeping bag, sleeping mat, camp eating utensils; if you are able to provide and/or share a tent, that would be very helpful; if you don't own and can't borrow a sleeping bag from AHS Students/Faculty, they can be rented from Outdoor Endeavors. See the field trip gear handout for detailed requirements.

FIELD REPORTS: A copy of the grading sheet used for field reports is attached to the syllabus. You can think of this as a checklist that will help you organize and include all the necessary information in your field reports. Not all your field reports will require all the components listed on the sheet; look at the instructions for each field report, so you can be sure you have included necessary material. Take some time to read the examples of BAD and GOOD field reports – I didn't copy them for you to use to mop up dog poop – look at them, and find the good, bad, and ugly in them. Your field reports need to be completed on time – just as they would do in a professional work situation, so they can be reviewed, graded and returned before the next report is due. Written material must be typewritten when requested, and must be composed of complete sentences and paragraphs, in a coherent order, and grammatically correct. All maps, diagrams, and graphs must be clear and legible, with legends, scales, and titles. Where appropriate, location maps and illustrations may be photocopied (and the source reference must be cited) for inclusion in the report. All references to published work must be cited at the end of the report. **Remember, you must proofread every report you hand in. IT IS ALWAYS EASIEST TO DO THE FIELD REPORT AS SOON AS POSSIBLE, WHILE THE WORK IS FRESH IN YOUR MIND**. *The best way to make sure your report is intelligible is to read it aloud – even better, get someone else to read it aloud to you:*

'Reading aloud is like playing electric – you hear every mistake.' (Sam P).

LOGISTICS: There is a lot of planning / organization and scheduling involved in running this course. I need you all to respond to requests for help, and just to hand assignments in in a timely manner.

DRIVERS: We have vehicles, but I will need volunteer drivers (if you are an experienced driver, this is a great thing to do for your CV/Resume, and it is much appreciated by the faculty) go to: http://www.stcloudstate.edu/facilities/motorpool.aspx

GRADING: Your grade will be based on four components.

Field Reports (75%) & Field Notebooks (25%)	67.5 %
Improvement in selected area(s); area(s) will be selected after first report	7.5 %
Geology Field Skills Quiz	10 %
Participation	15 %
Total	**100%**

ANTICIPATED SCHEDULE AHS 307 FIELD GEOLOGY FALL 2015

Date	Topic	Due – Work to hand in / Work returned
Weds 26th August	Introduction; Field Work Guide; Medical; Field Notes	
Fri 28th August	College Quarries	
Weds 2nd Sept	US Land Survey System & Brunton Compasses	
Fri 4th Sept	Blanchard Dam	College Quarries Field Report Due
Weds 9th Sept	Northern Minnesota Intro; Logistics; Writing	*College Quarries Field Report Returned* College Quarries Report Reviews Assigned
Fri 11th - Sunday 13th Sept	Northern Minnesota Field Trip	College Quarries Report Reviews Due
Weds 16th Sept	Making a Geologic Map	
Fri 18th Sept	Radio Tower - Mapping	Northern Minnesota Field Report Due
Weds 23rd Sept	SE Minnesota Preparation	Radio Tower Report Due *Northern Minnesota Field Report Returned*
Fri 25th – Sunday 27th Sept	SE Minnesota Field Trip	
Weds 30th Sept	SE Minnesota Review	*Radio Tower Map & Report Returned*
Fri 2nd Oct	Quarry Park Mapping # 1 *or* Sauk River	SE Minnesota Field Report Due
Weds 7th Oct	Review Quarry Park *or* Sauk River	*SE Minnesota Field Report Returned*
FALL BREAK 8th – 11th October		
Weds 14th Oct	SW Minnesota Preparation	
Fri 16th – Sunday 18th Oct	SW Minnesota Field Trip	
Weds 21st Oct	SW Minnesota Review	
Fri 23rd Oct	Quarry Park Mapping #1 or #2	SW Minnesota Field Trip Report Due
Weds 28th Oct	Review Requirements for Summary Field Report *or* CWI Assignment	*SW Minnesota Field Trip Report Returned*
Fri 30th Oct	Traut Drilling ? Quarry Park ? CWI Assignment ?	
Weds 4th Nov	Review Requirements for Summary Field Report *or* CWI Assignment	Quarry Park Map and Report Due
Fri 6th Nov	Traut Drilling ? Quarry Park ? CWI Assignment ?	
Weds 11th Nov	**November 11th VETERANS DAY**	
Fri 13th Nov	Summary Report Work Session	CWI Report Due ; *Quarry Park Returned*
Weds 18th Nov	Geologic Field Skills Quiz Prep	*CWI Report Returned*
Fri 20th Nov	Geology Field Skills Quiz	
Weds 27th Nov	**Summary Geologic Report Due**	**Summary Geologic Report Due**