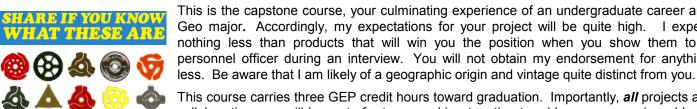
3 cr. (CAP, CIM) Dr. Neil C. Heywood GEO 490 Fall 2019

SENIOR RESEARCH (Geography/Geoscience)

Office Hours: on-line; or by appt Lecture 1: W 17-19:30: Sci B347* e-mail: nheywood@uwsp.edu

Office: Science D333 *except for the all-class meetings, each project team meets at its own weekly hour READ AND RETAIN THIS SYLLABUS!



This is the capstone course, your culminating experience of an undergraduate career and Geo major. Accordingly, my expectations for your project will be guite high. I expect nothing less than products that will win you the position when you show them to a personnel officer during an interview. You will not obtain my endorsement for anything

This course carries three GEP credit hours toward graduation. Importantly, all projects are collaborative; you will be part of a team working together to address a research problem. The faculty provide a choice of general research themes; student teams then refine one of these into a specific research question, with advice from a topical faculty mentor.

Project teams shall consist of no fewer than three and no more than five students; four is the ideal. Each team will meet for about one hour weekly with their topical advisor and/or myself; attendance is mandatory. Teams will mutually determine the time, day and place of their meetings to accommodate the schedules of the students and the faculty advisor(s). Except for the very first class meetings and the final presentations, we will NOT meet as a full class every Wednesday. Once you have made your project commitment to me via e-mail, you may NOT change to another question or team. You must make this commitment NO LATER than the end of the first class meeting on Wednesday, 04 September 2019. If you do not inform me by this deadline, I will review your coursework before assigning you to a team. Your team shall design, execute, and report upon a substantive research work of your mutual device. Collectively your team shall produce a project report, a poster, and an illustrated oral presentation, and individually you will provide a research journal and survey of your personal activities. In the "real world" you may rarely again ever find yourself required to come up with a solo prima donna product, but it is extremely likely that you will someday (translate as "very soon") need to contribute towards a team effort. This is how the modern professional workplace usually operates.

I will accept your projects only by delivery through electronic media. All word processing must be in the current campus version of MicroSoft Word; all journals/spreadsheets in MicroSoft Excel, and all presentations in MicroSoft PowerPoint. I will NOT accept any materials that are in inappropriate format or on tangible media (i.e., no paper or diskettes). Submit all group work into a team "dropbox" that I will set up on Canvas, and at my external back-up site. By this same procedure I shall return feedback and comments. Please do **NOT** send large attachments (report drafts with embedded graphics. PowerPoint presentations, etc.) by e-mail, as having many students doing this guickly jams my e-mail guota. Use the dropbox, and nothing else. There is no required textbook, but 30% of your course grade derives from weekly participation.

> **CLASS ID#**: Add (do not concatenate, append, or excise digits!) the last letter of your first name from your UWSP ID#. e.g. 12345678 (UWSP ID#)

> > 12(Neil)

12345690 THIS WOULD BE MY CLASS ID#

Α	В	С	D	Е	F	G	Н	1	J	K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	X	Υ	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

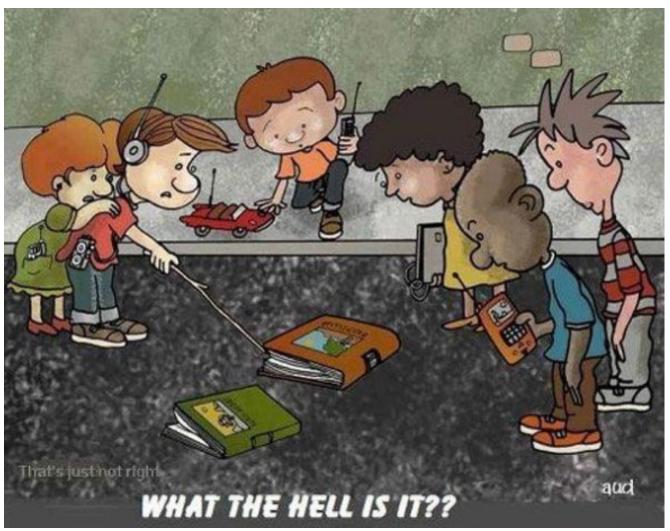
This extra procedure to further protect YOUR identity in this class. Do **NOT** use it to access UWSP computing accounts.

DATES (due dates in bold)	TOPICS	ITEMS DUE
W04SEP	All-class meeting: teams, Institutional Reviews	
Week ending F13SEP	Problem refinement, feasibility, product	Draft Proposal
Week ending F08FEB	Team research questions, data sources, proposal	Final Proposal 5%
Weeks ending F27SEP	Team report introduction drafts; problem statements	Statement Draft 5%
Week ending F04OCT	Team report methodology drafts	Methods & Data 5%
Weeks ending F18OCT	Team report analyses/interpretations drafts	Interpretations 5%
Week ending F08NOV	Team full report drafts	Report Draft
Weeks ending F06DEC	Team final reports; <i>Powerpoint</i> presentations/rehearsals	FINAL Report 30%
W11DEC17:00	All-class meeting: up to six Final Presentations (10%)	Personal Journal 5%
W18DEC 17:00	Final consultations	Evaluation Survey 5%

You must work as a team. Accordingly, there are **NO acceptable excuses** for late submissions; don't even ask. Have your tasks at the designated site and at the correct time and date, else you will all go without. If you habitually have relied upon second chances, or extra credit, you will find some very hard landings on the far side of the graduation stage—if you even get there. Second chances and extra credit do not apply in skydiving, heart surgery, nor nuclear hand grenades, nor shall they for GEO 490! Fair notice, Folks; got it? Be on time.

Please also examine campus Rights and Responsibilities, specifically pages 2-4, that explains Student Rights and Responsibilities within the UWSP campus community, including required behavior by students and faculty within the classroom environment. The professionalism component of your course grade depends in part upon your compliance with these official UWSP guidelines. If I hear of any 3 AM fistfights in our computing labs, you are back here again next year (if there is one).

Drop your preconceptions that Google and Social Media will save you. These can help (sometimes), but there are things called books and libraries (alien as these may have become to you) that warrant examination. Try one!



You may find some additional web links useful, even beyond GEO 490. I frequently receive requests for these.

News Academics Base Maps

Conversions free Adobe Reader **Scholarships**

Wisconsin Employment Wisconsin Job Center Federal Employment



Geography/Geoscience Oral Presentation Grading Rubric

CONTENT & SUBJECT	A: (10-9 pts)	B: (8-7 pts)	C: (6-5 pts)	D: (4-3) pts
KNOWLEDGE 35%	Excellent	Good	Satisfactory	Unsatisfactory
Research Effort & Accuracy Project definition Fit into scholarly framework Accuracy & relevance Methodology Analysis and results Conclusion	_ _ _ _	_ _ _ _		
Collegiate level				
Handling questions				
ORGANIZATION 15%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
Sequencing of information Logical, interesting sequence Component sections Smooth transitions Audience can follow	_ 	0		
Citations				
Group logistics (if applicable)				
MEDIA AIDS 15%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
Media				
Graphics	0 0 0 0	0 0 0 0		
Logistics				
Grammar • Spelling • Sentence construction				
DELIVERY 35%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
Eye contact				
Enthusiasm				
Elocution	_ _ _ _	0 0 0 0 0		
Timing • Time limit • Pacing				
Mannerisms & personal appearance				
Responsiveness to audience				
Audience engagement (if appropriate)				

CONTENT/SUBJECT KNOWLEDGE 35%	A: Excellent; 10-9 pts	B: Good; 8-7 pts	C: Satisfactory; 6-5 pts	D: Unsatisfactory; 4-3 pts
Research Effort and Accuracy	Speaker defines project objective, problem statement, or research question in a clear, coherent way;	Speaker defines project objective, problem statement, or research question;	Speaker does not define project objective, problem statement, or research question clearly;	Speaker does not define project objective, problem statement, or research question;
	Speaker provides a clear, compelling statement of how project fits into framework of existing research; statement is based on appropriate scholarly resources;	Provides a statement of how project fits into framework of existing research; statement is based on appropriate scholarly resources;	Presents an unclear or uncompelling statement of how project fits into framework of existing research, or statement is not entirely based on appropriate resources;	Presents little or no evidence of how project fits into the framework of existing research; or evidence is based on inappropriate resources;
	Provides completely accurate information and explanations of key concepts; all information is directly related to project thesis;	Presentation contains no significant errors regarding accuracy of informa- tion or explanations of key concepts; all information related to project thesis;	Presentation contains some significant inaccuracies or incorrect explanations of key concepts; contains information not directly related to project thesis;	Presentation contains a lot of inaccuracies or incorrect explanations of key concepts; much information is unrelated/ unsupportive of thesis;
	Clearly and concisely describes an appropriate methodology; readers could replicate methodology;	Describes an appropriate methodology; readers could likely replicate methodology;	Methodology is unclear or not entirely appropriate; replicating methodology would be difficult;	Methodology is not described or is inappropriate; readers would not be able to replicate methodology;
	Discussion of results and analysis is clear and concise, and addresses and interprets all key points correctly;	Discussion of results and analysis contains minor mistakes addressing or interpreting key points;	Results and analysis are unclear or contain some big mistakes address-ing or interpreting key points;	Discussion of results and analysis is missing or fails to address or correctly interpret many key points;
	 Provides a clear, coherent conclusion that shows thoughtful evaluation of evidence presented and that provides good suggestions for future research. 	Provides a conclusion that shows an evaluation of the evidence presented; provides suggestions for future research	Conclusion is somewhat incoherent and provides limited evaluation of evidence presented; provides limited or contrived suggestions for future research.	Conclusion is missing or provides no evaluation of the evidence presented; provides no suggestions for future research.
Collegiate level	Level of presentation is appropriate.	Level of presentation is generally appropriate.	Portions of presentation are too elementary or too sophisticated.	Presentation consistently is too elementary or too sophisticated.
Handling questions	Anticipates audience questions;	Anticipates some audience questions;	Does not anticipate questions;	Does not anticipate questions;
	Understands audience questions;	Understands most audience questions;	Does not understand many questions;	Does not understand questions;
	Demonstrates full knowledge of material; can explain and elaborate on answers to questions.	Demonstrates sufficient knowledge of material to answer questions, but doesn't elaborate.	Has difficulty answering questions beyond a rudimentary level.	Is unable to answer questions.
ORGANIZATION 15%	A: Extremely well organized; flows well; 10-9 pts	B: Generally well organized; flows; 8-7 pts	C: Somewhat organized; awkward flow; 6-5 pts	D: Not organized; does not flow; 4-3 pts
Sequencing of information	Information presented in a logical and interesting sequence;	Most information presented in a logical sequence;	Sequence of information not always logical or interesting;	Sequence of information illogical and uninteresting;
	Information clearly divided into component sections (e.g. introduction, methodology, etc.);	Information is divided into component sections (e.g. introduction, site description, methodology etc.);	Information not always clearly divided into sections (e.g. metho-dology mixed in with introduction);	Information not divided into com- ponent sections (e.g. introduction, site description, methodology);
	Has effective, smooth transitions between sections (introduction, methodology, results, etc.) and between key points within a section;	Has transitions between sections and key points but they are not always effective or smooth;	Transitions between sections and key points are not effective or smooth, or some transitions are missing; speaker jumps around from point to point or topic to topic;	Does not have transitions or transitions are ineffective; sections and key points are not connected; presentation is choppy and disjointed;

	Audience can easily follow and understand the presentation.	Audience can follow and understand presentation but a minor rearrange- ment would make presentation more interesting and easier to follow.	Audience has difficulty following and understanding the presentation.	Audience cannot understand or follow the presentation.
Citations	All sources are correctly cited;	Most sources are correctly cited;	Many sources are incorrectly cited;	Sources are not cited;
	Citations are complete and properly formatted;	Most citations are complete and properly formatted;	Many citations are incomplete and improperly formatted;	Citations are incomplete and improperly formatted;
	 Audience can determine credibility and authority of resources. 	Audience can determine credibility and authority of resources.	Audience has difficulty determining credibility and authority of resources.	Audience cannot determine credibility or authority of resources.
Group logistics (if applicable)	Each speaker knows when it's their turn; speakers transition from one speaker to the next speaker smoothly and seamlessly.	Each speaker knows when it's their turn; speakers transition from one speaker to the next, but not all transitions are smooth or seamless.	Some speakers are unsure when it's their turn; transitions are awkward.	Most speakers are unsure when it's their turn; transitions are abrupt and disjointed.
MEDIA AIDS 15%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
Media	 Media reinforce presentation thesis and maximize audience understanding. 	Media aid presentation thesis and audience understanding;	Media don't always aid presentation thesis or enhance understanding.	Media neither aid presentation thesis nor enhance audience understanding.
Graphics	Graphics are neither sparse nor busy;	Graphics are somewhat sparse or busy;	Graphics too sparse or too busy;	Graphics poorly prepared and detract from presentation;
	 Appropriate and artistic use of colors and fonts for emphasis or to aid organization of presentation; 	Mostly appropriate use of colors and fonts for emphasis or to aid organization of presentation;	Minimal color/font variation; or, slightly too many colors/fonts, which detract from presentation;	No color/font variation or too much color/font variation; slide appear-ance changes from slide to slide;
	Text sufficiently large to be read easily from the back of the room;	Text can be read from the back of the room;	Text too small to be easily read from the back of the room;	Text can't be read from the back of the room;
	 Sufficient text/information for audience to easily follow presentation, but not so much that audience is busy reading instead of listening; 	Sufficient text/information so that audience can follow presentation;	Some slides have insufficient text/ information or too much text/information so that audience has trouble following presentation;	All slides have insufficient text/ information or too much text/information so that audience is unable to follow presentation;
	All imagery and maps are at an appropriate resolution, use appropriate colors, and are appropriate for the context.	Most imagery and maps are at an appropriate resolution, use appropriate colors, and are appropriate for the context.	Much imagery and maps are at an inappropriate resolution, use inappropriate colors, and are inappropriate for the context.	All imagery and maps are at an inappropriate resolution, use inappropriate colors, and are inappropriate for the context.
Logistics	Speaker deals successfully with media limitations of presentation site; all media (e.g. slides, video, sound clips) work appropriately and appear correctly on screen.	Speaker deals with media limitations of the presentation site; all media work, but minor bugs or errors in the presentation occur.	Speaker has difficulty dealing with media limitations of presentation site; most but not all of the media work; some media appear incorrectly on screen.	Speaker is unable to deal with presentation site media limitations; much of the media do not work correctly or appear incorrectly on screen.
Grammar, spelling	No grammar or spelling mistakes;	Minor grammar spelling mistakes; errors insufficient to distract audience;	Some significant grammatical and spelling errors; audience is somewhat distracted;	Poor grammar and multiple spelling errors; sufficient problems that audience loses interest;
	Concise sentences; bulleted points may be incomplete sentences, but contain sufficient information that audience clearly understands the point.	Some wording is less than concise; bulleted points longer or shorter than necessary, but audience can still understand the point.	Writing is wordy and unclear; bulleted points too wordy or terse so audience has trouble understanding the point.	Writing is incomprehensible.

DELIVERY 35%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
Eye contact	Maintains eye contact with audience; looks at all parts of room;	Mostly maintains eye contact; looks at different parts of room;	Makes some eye contact; looks at only a few parts of room;	Makes almost no eye contact with audience;
	Seldom refers to notes.	Refers to notes frequently.	Reads notes at least half the time.	Reads all or most of the report.
Enthusiasm	Speaker is clearly interested in and	Speaker appears interested in the topic	Speaker appears somewhat bored with	Speaker shows no interest in or
	enthusiastic about the topic.	but presentation is a bit dry.	the topic.	enthusiasm about the topic.
Elocution	Articulates clearly;	Articulates most words clearly;	Articulates enough words unclearly that audience has questions;	Mumbles and articulates poorly; audience cannot understand;
	Pronounces all terms correctly;	Pronounces most terms correctly;	Mispronounces a moderate number of terms;	Mispronounces many terms;
	Uses correct grammar; speaks in complete sentences; sentences flow together easily;	Uses correct grammar but has a few incomplete sentences or sentences that don't flow readily;	Makes grammatical mistakes, talks in incomplete sentences, sentences don't flow;	Has such poor grammar that audience has trouble understanding; unable to string sentences together;
	Uses a rich and varied vocabulary;	Uses a vocabulary appropriate for the context;	Uses a vocabulary that is not always appropriate for the context;	Uses a vocabulary inappropriate for context;
	Modulates voice appropriately to maintain audience attention and to emphasize key points; uses an engaging tone;	Mostly modulates voice appropriately to maintain audience attention and to emphasize key points; mostly uses an engaging tone;	Doesn't modulate voice sufficiently to keep audience attention or emphasize key points, but doesn't talk in a mono- tone; or, modulates voice too much;	Talks in a monotone;
	Talks at a proper volume so everyone in the room can readily hear; not too soft and not too loud.	Talks at a volume that allows everyone to hear, but may be slightly soft or loud.	Talks so softly that audience has trouble hearing or so loudly that some feel they are being shouted at.	Talks so softly that audience cannot hear or so loudly that audience feels it is being shouted at.
Timing	Adheres to the time limit set forth within 10%;	Adheres to the time limit set forth within 20%;	Adheres to the time limit set forth within 30%;	• Is more than 30% off time limit set forth;
	Presents information at a normal speaking pace; audience can easily follow the information without getting bored.	Presents information at a slightly accelerated rate – audience can follow but needs to pay attention; or speaker presents information at a slightly slow pace – audience can easily follow but may lose interest.	Presents information at fast pace; crams more information into time limit than audience can absorb; audience may get lost. OR speaker presents informa-tion so slowly that audience loses inter-est; speaker is clearly trying to eat up time.	Presents information at a pace that is too fast or too slow (e.g. trying to eat up time; doesn't know what to say next).
Mannerisms & personal appearance	Speaker is poised, confident, and comfortable speaking in front of a group; no distracting mannerisms;	Speaker is slightly nervous, but still competent at speaking in front of a group; no distracting mannerisms;	Speaker is nervous and uncom- fortable speaking in front of a group; some negative mannerisms;	Speaker is extremely nervous and uncomfortable; negative mannerisms distract audience;
	Personal appearance is completely appropriate for the occasion and audience.	For the most part, personal appearance is appropriate for the occasion and audience;	Personal appearance is somewhat inappropriate for the occasion and audience.	Personal appearance is inappropriate for the occasion and audience.
Responsiveness to audience	Demonstrates extensive knowledge of the topic by responding confidently, precisely and appropriately to all audience questions;	Demonstrates knowledge of the topic by responding appropriately to audience questions but doesn't elaborate;	Demonstrates some rudimentary knowledge by responding appropriately to some but not all questions; fails to elaborate;	Demonstrates incomplete knowledge of the topic by responding inappropriately to many questions;
	Clarifies, restates or summarizes information when needed;	Occasionally clarifies, restates, or summarizes information;	Rarely clarifies, restates or summarizes information;	Never clarifies, restates or summarizes information;
	Holds audiences' attention throughout the presentation.	Holds audiences' attention most of the time.	Only occasionally holds audiences' attention.	Loses audiences' interest.

Engagement with audience (as	Actively involves audience in the presentation;	Generally involves audience in the presentation;	Reluctantly involves audience in the presentation;	Avoids or discourages active audience involvement;
appropriate)	Encourages audience interaction; calls on classmates by name.	Encourages audience interaction.	Misses opportunities for interaction.	Avoids or discourages audience interaction.

Geography/Geoscience Paper Grading Rubric

CONTENT & SUBJECT KNOWLEDGE	A: (10-9 pts)	B: (8-7 pts)	C: (6-5 pts)	D: (4-3) pts
40%	Excellent	Good	Satisfactory	Unsatisfactory
Research Effort & Accuracy				
Project definition				
Fit in scholarly framework				
Accuracy & relevance				
Methodology				
Analysis & results				
Conclusion				
Collegiate level				
WRITING: GRAMMAR &	A: (10-9 pts)	B: (8-7 pts)	C: (6-5 pts)	D: (4-3) pts
COMPOSITION 40%	Excellent	Good	Satisfactory	Unsatisfactory
Grammar/spelling				
Sentence structure				
Wording				
Correct use of scientific terms				
Component sections				
Section organization, flow				
Paragraph organization, flow				
CITATIONS 10%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
All sources cited				
• Completeness & formatting				
Reference list complete				
Reference list formatting				
MECHANICS 10%	A: (10-9 pts)	B: (8-7 pts)	C: (6-5 pts)	D: (4-3) pts
. Harding his make	Excellent	Good	Satisfactory	Unsatisfactory
Heading hierarchy Consequeivaly fragrantship mymbers				
Consecutively figure/table numbers Separate figure/table numbers				
Separate figure/table numbers Order of figures/tables				
Order of figures/tables Tout appairs				
• Text spacing				
• Margins				
• Font	ш		□	Ц

CONTENT/SUBJECT KNOWLEDGE 35%	A: Excellent; 10-9 pts	B: Good; 8-7 pts	C: Satisfactory; 6-5 pts	D: Unsatisfactory; 4-3 pts
Research Effort and Accuracy	Introduction defines project objective, problem statement, or research question in a clear, coherent way;	Introduction defines project objective, problem statement, or research question;	Introduction does not define project objective, problem statement, or research question clearly;	Introduction does not define project objective, problem statement, or research question;
	Statement of how project fits into framework of existing research is clear and compelling, and is based on appropriate scholarly resources;	Statement of how project fits into framework of existing research is based on appropriate scholarly resources;	Statement of how project fits into framework of existing research is unclear, uncompelling, or not entirely based on appropriate resources;	Statement of how project fits into framework of existing research is missing or is based on inappropriate resources;
	Contains completely accurate information and explanations of key concepts; all information is directly related to project thesis;	Contains no significant errors regarding accuracy of information or explanations of key concepts; all information related to project thesis;	Contains some significant inaccuracies or incorrect explanations of key concepts; contains information not directly related to project thesis;	Contains a lot of inaccuracies or incorrect explanations of key concepts; much information is unrelated/unsupportive of thesis;
	Clearly and concisely describes an appropriate methodology; readers could replicate methodology;	Describes an appropriate methodology; readers could likely replicate methodology;	Methodology is unclear or not entirely appropriate; replicating methodology would be difficult;	Methodology is not described or is inappropriate; readers would not be able to replicate methodology;
	Discussion of results and analysis is clear and concise, and addresses and interprets all key points correctly;	Discussion of results and analysis contains minor mistakes addressing or interpreting key points;	Results and analysis are unclear or contain some big mistakes addressing or interpreting key points;	Discussion of results and analysis is missing or fails to address or correctly interpret many key points;
	Contains a clear, coherent conclusion that shows thoughtful evaluation of evidence presented and provides good suggestions for future research.	Contains a conclusion that shows evaluation of the evidence presented; provides suggestions for future research.	Conclusion is somewhat incoherent and provides limited evaluation of evidence presented; provides limited or contrived suggestions for future research.	 Conclusion is missing or provides no evaluation of the evidence presented; no suggestions for future research.
Collegiate level	Level is consistently appropriate.	Level is generally appropriate.	Portions too elementary.	Level is consistently too elementary.
WRITING: Grammar & Composition 35%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
	Few grammatical errors, typos or misspellings;	Some grammatical errors, typos and spelling errors;	Significant grammatical errors, typos and spelling errors;	Consistently poor grammar, multiple typos and spelling errors;
	Concise, clear sentence structure; wording is unambiguous;	Sentence structure is mostly concise and clear; some minor ambiguities;	Sentence structure is wordy and awkward; meaning not always clear;	Sentence structure is nearly incomprehensible;
	Appropriate word selection;	Some inappropriate word selection;	A moderate number of examples of inappropriate word selection;	Multiple instances of inappropriate word selection;
	Correct use of scientific terns;	Some misuse of scientific terms;	A moderate number of instances where scientific terms are used inappropriately;	Multiple instances where scientific terms are used inappropriately;
	Information clearly divided into component sections (e.g. introduction, methodology); smooth flow between sections;	Information divided into component sections; transitions between sections not always smooth;	Information not always clearly divided into sections; transitions between sections somewhat awkward or abrupt;	Information not divided into component sections or information belonging in separate sections mixed together;
	Information within each section logically organized; no redundant information; smooth flow between ideas;	Organization of information within each section mostly logical; some redundant information; flow between ideas not always smooth;	Organization of information within each section often not logical; poor organization results in a moderate amount of redundant information; awkward flow between ideas;	no transition between sections; No organization to information within each section; lack of organization results in much redundant information; no flow between ideas within a section.

	Paragraphs are organized around a coherent point, contain a topic sentence, and a logical, effective flow of ideas.	Most paragraphs are organized around a coherent point and contain a topic sentence, and for the most part, the flow of ideas is logical and effective.	A significant number of paragraphs are not organized around a coherent point, or do not contain a topic sentence, or contain ideas that do not connect logically and effectively.	Many paragraphs are unorganized and ramble from one idea to another; topic sentences are missing; ideas do not connect in a logical or effective manner.
CITATIONS 5%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
	All sources that should be cited are cited;	Most sources that should be cited are cited;	Many sources that should be cited are not cited;	Few or no sources that should be cited are cited;
	All citations are complete and properly formatted;	Most citations are complete and properly formatted;	Many citations are incomplete or improperly formatted;	Citations are incomplete and improperly formatted;
	• Reference list is complete	• Reference list is complete;	• Reference list is missing a few items;	• Reference list is missing many items;
	Reference list is properly formatted using Department citation style.	Reference list uses Department style, but includes minor formatting errors.	Reference list includes formatting errors; does not always follow Department style.	Reference list is improperly formatted; does not follow Department style.
MECHANICS 10%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
	Clear hierarchy of first and second order headings;	Hierarchy of first and second order headings;	Hierarchy of first and second order headings is not always unclear;	Hierarchy of first and second order headings isn't clear or doesn't exist;
	All tables and figures numbered consecutively;	Almost all tables and figures numbered consecutively; reader can figure out which figures/tables go along with the text;	A number of tables and figures are not numbered consecutively; reader is somewhat confused relating text to tables/figures;	 Many tables and figures are not numbered consecutively; some tables/figures are missing numbers; reader is confused relating text to tables/figures;
	Table numbering is separate from figure numbering;	Table numbering is separate from figure numbering;	Numbering of tables and figures is mixed together; some tables are called figures;	Numbering of tables and figures is mixed together; some tables are called figures; some tables/figures are missing numbers; reader gets lost;
	Tables and figures are presented in the order in which they are discussed;	Most tables & figures are presented in the order in which they are discussed; reader can figure out which figures/tables go along with the text;	A number of tables and figures are presented out of order; reader is somewhat confused relating text to tables/figures;	Many tables and figures are presented out of order; reader is confused relating text to tables/figures;
	Tables and figures come after they are first mentioned; Tables and figures are placed close to first mention;	Most tables and figures come after they are first mentioned; Tables and figure are placed close to first mention;	Some tables/figures come after first mention and some come before; Placement of figures and tables is not always close to first mention;	Some tables/figures come first mentioned but many come before; Tables/figures placed sufficiently far from first mention that reader has trouble locating them;
	Body text is one-and-a-half or double spaced;	Body text is one-and-a-half or double spaced;	Body text is single- spaced or more than double-spaced;	Body text is single- spaced or more than double-spaced;
	One inch margins;	One inch margins;	Margins are slightly more or less than one inch;	Margins are clearly more than or less than one inch;
	• 10-12 point font size	• 10-12 point font size	Font size is slightly less than 10 point or slightly more than 12 point	Font size is clearly less than 10 point or more than 12 point
				The combination of margins and font

				size indicate the writer is either trying to use up space to meet a page minimum or trying to cram too much information into a page maximum;
Graphics 15%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
	Graphics are well designed and aesthetically appealing based on standard accepted formats (appropriately labeled & sized; appropriate use of color, easy to read and understand);	Most graphics are well designed and aesthetically appealing based on standard accepted formats; some graphics contain minor design issues;	A significant number of graphics are poorly designed or are not aesthetically appealing based on standard accepted formats; or some graphics contain major design issues;	A significant number of graphics are poorly designed, are not aesthetically appealing and/or do not follow any standard accepted formats;
	 Graphics draw readers in by catching their interest and attention; 	Graphics draw most readers in by catching their interest and attention;	Graphics catch the attention of some readers;	Graphics catch the attention of only a few readers;
	Graphics are neither sparse nor busy;	Graphics are somewhat sparse or busy;	Graphics are too sparse or too busy;	Graphics poorly prepared and detract from poster;
	All graphics/images/maps are at an appropriate resolution;	Most graphics/images/maps are at an appropriate resolution;	Many graphics/images/maps have an inappropriate resolution;	All graphics/imagery/ maps are at an inappropriate resolution;
	All graphics are appropriate for the context.	Most graphics are appropriate for the context	Many graphics are inappropriate for the context.	Most graphics are inappropriate for the context.

Geography/Geoscience Poster Grading Rubric

CONTENT & SUBJECT KNOWLEDGE 40%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
Research Effort & Accuracy • Project definition • Fit in scholarly framework • Accuracy & relevance • Methodology • Analysis & results • Conclusion				
Collegiate level				
Amount of information				
ORGANIZATION 15%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
 Logical, interesting sequence Visual hierarchy Component sections Flow between columns/frames 				
WRITING 20%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
Grammar & Composition Grammar/spelling Concise, coherent writing Existence of redundancies Citations Sources cited Citation completeness & formatting				
Reference list completeness & formatting				
VISUAL APPEARANCE 25%	A: (10-9 pts) Excellent	B: (8-7 pts) Good	C: (6-5 pts) Satisfactory	D: (4-3) pts Unsatisfactory
Text Readability from five feet Column width Titles & subtitles Visual hierarchy of text Application of text hierarchy Colors & fonts				
Graphics Design Attention-grabbing Sparse/busy Appropriate resolution Appropriate for context				
Overall design & layout Layout & visually appeal Visual balance Graphics placement Use of color Column length/alignment Background/foreground contrast				

CONTENT/SUBJECT KNOWLEDGE 40%	A: Excellent; 10-9 pts	B: Good; 8-7 pts	C: Satisfactory; 6-5 pts	D: Unsatisfactory; 4-3 pts
Research Effort and Accuracy	Poster defines project objective, problem statement, or research question in a clear, coherent way;	Poster defines project objective, problem statement, or research question;	Poster does not define project objective, problem statement, or research question clearly;	Poster does not define project objective, problem statement, or research question;
	Statement of how project fits into framework of existing research is clear and compelling, and is based on appropriate scholarly resources;	Statement of how project fits into framework of existing research is based on appropriate scholarly resources;	Statement of how project fits into framework of existing research is unclear, uncompelling, or not entirely based on appropriate resources;	Statement of how project fits into framework of existing research is missing or is based on inappropriate resources;
	Contains completely accurate information and explanations of key concepts; all information is directly related to project thesis;	Contains no significant errors regarding accuracy of information or explanations of key concepts; all information related to project thesis;	Contains some significant inaccuracies or incorrect explanations of key concepts; contains information not directly related to project thesis;	Contains a lot of inaccuracies or incorrect explanations of key concepts; much information is unrelated/unsupportive of thesis;
	Clearly and concisely describes an appropriate methodology; readers could replicate methodology;	Describes an appropriate methodology; readers could likely replicate methodology;	Methodology is unclear or not entirely appropriate; replicating methodology would be difficult;	Methodology is not described or is inappropriate; readers would not be able to replicate methodology;
	Discussion of results and analysis is clear and concise, and addresses and interprets all key points correctly;	Discussion of results and analysis contains minor mistakes addressing or interpreting key points;	Results and analysis are unclear or contain some big mistakes addressing or interpreting key points;	Discussion of results and analysis is missing or fails to address or correctly interpret many key points;
	Contains a clear, coherent conclusion that shows thoughtful evaluation of evidence presented and that provides good suggestions for future research.	Contains a conclusion that shows evaluation of the evidence presented; provides suggestions for future research.	Conclusion is somewhat incoherent and provides limited evaluation of evidence presented; provides limited or con- trived suggestions for future research.	Conclusion is missing or provides no evaluation of the evidence presented; no suggestions for future research.
Collegiate level	Level is consistently appropriate.	Level is generally appropriate.	Portions too elementary or sophisticated.	Level is consistently too elementary or too sophisticated.
Contextual Layout	Sufficient content to fill allowed poster space.	Slightly too much or too little information; poster looks a bit cramped or a bit bare.	Too little or too much information crammed into allowed space; poster looks cramped or bare.	Too little or too much information crammed into allowed space; poster looks really cramped or really bare.
ORGANIZATION 15%	A: Extremely well organized; flows well; 10-9 pts	B: Generally well organized; flows; 8-7 pts	C: Somewhat organized; awkward flow; 6-5 pts	D: Not organized; does not flow; 4-3 pts
	Information presented in a logical and interesting sequence;	Most information presented in a logical sequence;	Sequence of information not always logical or interesting;	Sequence of information illogical and uninteresting;
	Information has a clear visual hierarchy;	Information has a visual hierarchy;	Visual hierarchy of information is not clear.	There is no visual hierarchy to information;
	Information clearly divided into component sections (e.g. introduction, methodology, etc.);	Information is divided into component sections (e.g. introduction, site description, methodology etc.);	Information not always clearly divided into sections (e.g. methodology mixed in with introduction);	Information not divided into component sections (e.g. introduction, site description, methodology);
	 Flow from column to column or from frame to frame and between graphics and text is clear and easy to follow; it's obvious to a reader where to go and what to read next. 	Flow from column to column or from frame to frame and between graphics and text is clear to follow; reader can determine where to go and what to read next.	Flow from column to column or from frame to frame and between graphics and text is some-what confusing; reader not always sure where to go or what to read next.	Flow from column to column or from frame to frame and between graphics and text is confusing; reader does not know where to go or what to read next.

WRITING 20%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
Grammar & composition	No grammar or spelling mistakes; Concise sentences; bulleted points	Minor grammar spelling mistakes; errors insufficient to distract reader; Some wording is less than concise;	Significant grammar and spelling errors; Writing is wordy and unclear; bulleted	Consistently poor grammar and multiple spelling errors; Writing is incomprehensible;
	may be incomplete sentences, but contain sufficient information that reader clearly understands the point;	bulleted points longer or shorter than necessary, but reader can still understand the point	points so wordy or so terse reader has trouble understanding the point;	
	No redundant information.	Some minor redundancies.	Multiple redundancies.	Lots of redundant information.
Citations	All sources are cited;	Most sources are cited;	Many sources are not cited;	Few or no sources are cited;
	All citations are complete and properly formatted;	Most citations are complete and properly formatted;	Many citations are incomplete or improperly formatted;	Citations are incomplete and improperly formatted;
	Reference list is complete and properly formatted using Department citation style;	Reference list is complete and uses Department style, but includes minor formatting errors;	Reference list is missing a few items and includes formatting errors; does not always follow Department style;	Reference list is incomplete and improperly formatted; does not follow Department style;
VISUAL APPEARANCE 25%	A: Excellent 10-9 pts	B: Good 8-7 pts	C: Satisfactory 6-5 pts	D: Unsatisfactory 4-3 pts
Text	Combination of font, text size and line spacing is easy to read from a distance of five feet;	Combination of font, text size and line spacing can be read from a distance of five feet;	Combination of font, text size and line spacing is somewhat difficult to read from distance of five feet;	Combination of font, text size and line spacing is difficult to read from distance of five feet;
	Body text is divided into columns or blocks of text that are narrow enough for reader's eyes to move easily from the end of one line of text to start of the next line of text;	Body text is divided into columns or blocks of text that are narrow enough for a reader's eyes to move from the end of one line of text to the start of the next line of text;	Body text is divided into columns or blocks of text that are too wide; difficult for reader's eyes to move from the end of one line of text to the start of the next line of text;	Body text is divided into columns or blocks of text that are too wide for a reader to keep their place as their eyes move from line to line;
	Title (and subtitle) is significantly larger or different from poster content; clearly attracts attention;	Title (and subtitle) is larger or different from poster content; attracts attention of most readers;	Title (and subtitle) does not stand out significantly from content; title doesn't attract much attention;	Title (and subtitle) does not stand out from poster content; title does not attract attention;
	A clear visual hierarchy of headings, subtitles, body text, and figure caption text exists (based on font, text size, color, alignment, and/or spacing);	A visual hierarchy of headings, subtitles, body text, and figure caption text exists (based on font, text size, color, alignment, and/or spacing);	Visual hierarchy of headings, subtitles, body text, and figure caption text is unclear; too little or too much variation (based on font, text size, color, alignment, and/or spacing);	No visual hierarchy of headings and subtitles, or body text and figure caption text exists; no variation exists or variations exist but do not reveal a hierarchy;
	Text hierarchy and formatting is applied consistently;	Minor inconsistencies in application of text hierarchy and formatting; doesn't detract from poster appearance or comprehension;	Application of text hierarchy and formatting is inconsistent and detracts from poster appearance and reader comprehension;	Text hierarchy not evident; detracts significantly from poster appearance and reader comprehension;
	Appropriate and artistic use of colors and fonts for emphasis or to aid organization of poster information.	Mostly appropriate use of colors and fonts for emphasis or to aid organization of poster information.	Minimal color/font variation; or, slightly too many colors/fonts, which detracts from poster organization.	No color/font variation – poster looks boring, or too much color/font variation – poster looks like a circus.
Graphics	Graphics are well designed and aesthetically appealing based on standard accepted formats (appropriate labeling, size, use of color; easy to read and	Most graphics are well designed and aesthetically appealing based on standard accepted formats; some graphics contain minor design issues;	A significant number of graphics are poorly designed or not aesthetically appealing based on standard accepted formats; or some graphics contain	A significant number of graphics are poorly designed, are not aesthetically appealing and/or do not follow any standard accepted formats;

	understand);		major design issues;	
	Graphics draw readers in by catching their interest and attention;	Graphics draw most readers in by catching their interest and attention;	Graphics catch the attention of some readers;	Graphics catch the attention of only a few readers;
	Graphics are neither sparse nor busy;	Graphics are somewhat sparse or busy;	Graphics are too sparse or too busy;	Graphics poorly prepared and detract from poster;
	All graphics/images/maps are at an appropriate resolution;	Most graphics/images/maps are at an appropriate resolution;	Many graphics/images/maps have an inappropriate resolution;	All graphics/imagery/ maps are at an inappropriate resolution;
	All graphics are appropriate for the context.	Most graphics are appropriate for the context	Many graphics are inappropriate for the context.	Most graphics are inappropriate for the context.
Overall design and layout	Poster is visually appealing and attracts the attention of readers due to artistic layout of graphics, text and white space; space is used effectively and the visual flow of information is clear;	Poster is visually appealing and attracts the attention of most readers due to appropriate layout of graphics, text and white space; space is used effectively and the visual flow of information is clear;	Poster is only somewhat appealing; attracts the attention of few readers due to some inappropriate layout of graphics, text and white space; space is not used effectively and the visual flow of information is unclear;	Poster not visually appealing and does not attract the attention of readers due to inappropriate layout of graphics, text and white space; space is not used effectively and the visual flow of information is unclear;
	Visual balance (spacing between components) is logical and consistent; attracts readers;	Minor inconsistencies in visual balance; insufficient to detract from poster appearance or reader comprehension;	Visual balance is not always logical or is inconsistent; detracts from poster appearance; readers lose interest;	No visual balance to components; detracts significantly from poster appearance; readers not attracted to poster;
	Graphics are artistically interspersed with text; graphics do not interrupt flow of text; graphics clearly enhance the message of the poster;	Graphics are interspersed with text; most graphics do not interrupt flow of text; graphics enhance message of poster;	Graphics are interspersed with text but some graphics interrupt flow of text; some graphics don't enhance message of poster or are out of context or inappropriate;	Graphics are interspersed with text but graphics interrupt flow of text; many graphics do not enhance message of poster or are out of context or are inappropriate;
	Color is used effectively and artistically to attract readers and to emphasize key points or headings;	Color is used to attract readers and to emphasize key points or headings;	Color is used color ineffectively; colors do not help attract readers and do not help emphasize key points or headings;	Colors clash or are completely lacking; colors don't attract readers and don't help emphasize key points or headings;
	Columns of similar length are aligned at the top or the bottom;	Most columns of similar length are aligned at the top or the bottom;	Many columns of similar length are not aligned at the top or the bottom;	Many columns of similar length are not aligned at the top or the bottom;
	Significant contrast and differentiation exists between background (whether a color, pattern, or image) and foreground; background doesn't detract from readability of information.	Contrast and differentiation exists between background (whether a color, pattern, or image) and foreground; background doesn't significantly detract from readability of information.	Contrast and differentiation between background (whether a color, pattern, or image) and foreground isn't sharp enough; background detracts from readability of information.	Contrast and differentiation between background (whether a color, pattern, or image) and foreground is weak; information is significantly difficult to read.

Reference List and Citation Guide

A reference list includes only those resources that you actually cite in your paper/presentation/poster; every resource listed in the reference list should be cited somewhere in the paper/presentation/poster and every source cited in the paper/presentation/poster should appear in the reference list. The reference list must include enough information so that the reader can obtain any of the resources you used.

The general order of information included in each reference is the same, regardless of the type of resource: author, date, title, pages if appropriate, publisher. Do not type out full first or middle names, just use initials.

Books

General format: Author last name, first and middle initials. With multiple authors, the first author is listed last-name first followed by initials; all other authors are listed by initials first, followed by last name. If there are two authors, separate their names by "and." If there are more than two authors, separate all author names with a comma except for last two names – separate them with a comma and "and." Publication date. *Book title* (italicize; capitalize first word and formal names). Place of publication: Publisher.

One author:

Knighton, D. 1984. Fluvial forms and processes. London: Edward Arnold.

Two or more authors:

Gregory, K.J. and D.E. Walling. 1973. *Drainage basin form and process: A geomorphological approach*. London: Edward Arnold.

Gordon, N.D., T.A. McMahon, and B.L. Finalyson. 1992. *Stream hydrology: An introduction for ecologists*. Chichester: John Wiley & Sons.

Book with editors:

Foulger, G.R. and D.M. Jurdy, eds. 2007. *Plates, plumes, and planetary processes*. Special paper 430. Boulder: The Geological Society of America.

Chapter in an edited volume:

Mickelson, D.M. 1987. Central lowlands. In *Geomorphic systems of North America*, ed. W.L. Graf, 111-118. Boulder: The Geological Society of America.

Print Journal Articles

General format: Author last name, first and middle initials. With multiple authors, the first author is listed last-name first followed by initials; all other authors are listed by initials first, followed by last name. List all names for up to 10 authors; if more than 10 authors, list the first author and "et al." (there is a period after "al" because it's an abbreviation; et al. means "and others"). Publication Date. Title of article (capitalize first word and formal nouns). *Title of Publication* (italicize; capitalize first letters of words), volume (issue number): page numbers.

Print article:

Fulford, J.M. 2001. Accuracy and consistency of water-current meters. *Journal of the American Water Resources Association* 37(5):1215-1224.

Harrison, L.R. and E.A. Keller. 2007. Modeling forced pool-riffle hydraulics in a boulder-bed stream, southern California. *Geomorphology* 83:232-248.

Article in conference proceedings:

Cannatelli, K.M. and J.C. Curran. 2009. The processes surrounding channel evolution following a partial dam removal on the coastal plain of Virginia. In: 33rd IAHR Congress: Water Engineering for a Sustainable Environment. August 9-14, 2009, Vancouver, BC. IAHR; 3062-3069.

Glassow, M.A., O.A. Chadwick, R.L. Perroy, and J.T. Howarth. 2009. Alluvial history and human prehistory in Pozo Canyon, Santa Cruz Island, California. In *Proceedings of the Seventh California Islands Symposium*, eds. C.C. Damiani and D.K. Garcelon, 53-65. Arcata, CA: Institute for Wildlife Studies.

Technical report:

WMO. 2010. *Manual on Stream Gauging: Vol II – Computation of Discharge*. World Meteorological Organization; WMO-No. 1044. Geneva: WMO.

Article in a daily newspaper:

Yoon, D.K. 2000 Dec 26. DNA clues improve outlook for red wolf. New York Times, Section F:10 (col. 1).

Online Journal Articles and Books

General format: Same format as print journal articles, but if available, you should add "doi: doi number". If there is no doi, you may need to add a URL and the date you accessed the article.

Many print journal articles are also available digitally online. If you access a print journal article digitally and the article has a DOI (digital object identifier), add the doi. If the digital version of a print article also has a volume (issue) and page numbers, include them. Some digital journal articles are available only in digital form, in which case there may be no issue or page numbers but there may be another type of identifier, which you should include, along with the doi. For some articles there may be no doi and no print version, in which case you should include the URL and the date you accessed the information. The access date is important because publishers may reorganize their web sites or may remove old information as new information is added, in which case someone trying to obtain your resource may not find it.

Print article accessed in digital form; no doi provided and article is also available in print:

Griffiths, G.A. 1980. Hydraulic geometry relationships of some New Zealand gravel bed rivers. *Journal of Hydrology (NZ)* 19(2):106-118.

Print article accessed in digital form; doi provided:

Jackson, R.G. 1975. Velocity–bed-form–texture patterns of meander bends in the lower Wabash River of Illinois and Indiana. *GSA Bulletin* 86(11):1511-1522, doi: 10.1130/0016(1975)86.

Digital form only article:

Jiménez-Gonzalez, I., C. Rodríguez-Navarro, and G.W. Scherer. 2008. Role of clay minerals in the physicomechanical deterioration of sandstone. *Journal of Geophysical Research* 113:F02021, doi: 10.1029/2007JF000845.

Digital form technical report:

Holmes, R.R. Jr., P.J. Terrio, M.A. Harris, and P.C. Mills. 2001. *Introduction to field methods for hydrologic and environmental studies*. U.S. Geological Survey Open-File Report 01-50. Denver: USGS. http://il.water.usgs.gov/pubs/ofr01-50 chapter1.pdf (accessed 10/2/12).

Web Sites

General format: Author (if known) or organization hosting the site if no author is listed. Date of publication; date of last update (if available). Title of web site. Place of publication: Publisher. URL (date accessed).

The author may be a person or an organization. If there is no date of publication, use the last-modified date, and if there is no last-modified date, then type "n.d." To find the title of the web site you may need to back up in the URL to see what the top page is from which the page you're referencing is linked. Include the title of the web site and the title of the page you are accessing, if appropriate.

Lemke, K.A. Last update 9/5/12. Stream flow. *Geography/Geology 352: Geomorphology*. UWSP: Geography/Geology Department. http://www4.uwsp.edu/geo/faculty/lemke/geomorphology/lectures/02_stream_flow.html (accessed 10/26/12).

Danehy, R.J. and J.M. Hassett. 1996. Stream habitat quantification by use of the Froude Number. *Stream Systems Technology Center – Stream Notes*. Fort Collins: USDA Forest Service, Stream Systems Technology Center. http://stream.fs.fed.us/news/streamnt/jan96/jan96a3.htm (accessed 10/26/12).

Citing Material in the Body of Your Paper

Citations are important not only because they allow listeners or readers to check out your information sources if they are so inclined, citations also lend credibility to your work. Citations let the listener/reader know that you are not making things up. When several sources include the same information, you want to list all of those sources because this increases the credibility of the information – it's not just one scientist who found something to be true; many researchers agree with this finding.

Citations embedded within the body of your paper include last names and publication date only. Citations do not include first names, do not include initials, and do not include titles or publishers or any other details. All the details are in the reference list. If there is just one author, the citation includes the author's last name and the date. If there are two authors, the citation includes both author last names and the date. If there are three or more authors, the citation includes the first author's name and "et al." and the date.

Examples:

Fulford (2001) determined that Swoffer digital current meters and Price Type-AA current meters had similar accuracies, but the Swoffer meters did not always meet the stringent accuracy limits Swoffer claimed they met.

When using current meters to calculate discharge, Gordon et al. (1992) suggest taking one velocity reading per meter of channel width; however other sources recommend spacing the readings so that about five percent of the total flow passes through any one section (Holmes et al. 2001; Sauer and Meyer 1992; Shedd 2011).

When using the author's name as the subject of a sentence, as in the first example above, put the date in parentheses immediately following the author's name. If there are two authors, use both author last names as the subject and put the date in parentheses. If there are three or more authors, as with Gordon et al. in the second example above, use the first author's last-name and "et al." as the subject and put the date in parentheses.

When making a statement followed by the source of the information, as in the last example above, the author names and dates all go in parentheses after the statement. Sometimes the statement and its sources occur in the middle of a sentence, and sometimes at the end of the sentence. When the citation occurs at the end of a sentence, the period for the sentence comes after the parentheses, not before them. There are no commas or other punctuation marks

separating the author name(s) from the date, except in the case where you use et al., in which case you need a period after "al" because it's an abbreviation. If you found the same information in several sources, such in the last example above, use a semi-colon to separate the individual sources.

If you have multiple papers/books by the same author published in the same year, attach "a," "b," etc. to the end of the year in both the reference list and the embedded citation in the paper.

Other Reference and Citation Guides

The Geography/Geology Department reference list and citation guide is based on the system used by the Annals of the Association of American Geographers. This system is very similar to those used in other key publications in the disciplines of geography and geology, including The Journal of Geology, GSA Bulletin, and The Professional Geographer.

Other Reference and Citation Guides:

Council of Science Editors: The CSE manual contains three systems of citing information, of which the name-year system is very similar to the format outlined above. The main differences relate to punctuation and formatting, not the information included, or the ordering of the information. Information and examples are available at: http://writing.wisc.edu/Handbook/DocCBE.html and http://library.osu.edu/help/research-strategies/cite-references/cse/.

The Chicago Manual of Style: The CMS manual documents two systems of citing information, of which the authordata system is very similar to the format outlined above. Differences arise in punctuation, writing-out authors' entire first names rather than using initials only, and placement of the date in the reference list (but not the embedded citation). The information included in the citation format is the same as listed above. Information and examples are available at: http://www.chicagomanualofstyle.org/home.html.

American Psychological Association: APA is another widely-used style format. Information is available at: http://www.apastyle.org/.

BLATHER 101:

OBFUSCATION AND CLICHÉS IN COMMUNICATION

As you will soon discover, I react venomously to careless communication, and especially when it continues after I take the time to review and offer constructive criticism of your work. Please enlighten me no further about such remarkable phenomena as the "ingenious rocks", "sedentary rocks", "metaphysical rocks", "carnivorous forests", "Himalayan martian climbers", "incestivores", and other such hitherto undiscovered wonders of the world; your predecessors have cast all the illumination upon these subjects as my laughing gut can endure.

Aside from the usual careless spelling and grammar mistakes ("a mistake is an error that should not have happened"), I come down hard on poor citations, and stylistic mannerisms that render your message obscure. Two of the latter in particular I consistently find rampant in student writing: passive voice, and trite phrases. Years of reading student and professional submissions brings me to the sad conclusion that many contemporary graduating college students (and no few active professionals nowadays) do not even know what these are, let alone realize their impact upon professional credibility. Not to entirely fault students; I can readily imagine where they receive their stylistic modeling now.

Do not rely solely on spell-checkers and grammar-checkers to catch all mistakes for you. These often miss over half of the flaws, catching only the most blatant. That wonderful machine has no more brains than any other kilogram of copper and plastic; would you allow a toilet float to perform your heart surgery or pack your parachute? Communication is as essential to your social well-being as a heartbeat or a soft landing is to your physical. A human mind (YOURS) must maintain oversight. YOU should proofread all of your communication!

Passive voice is a valid grammatical construct. The problem is that most writers, especially in the sciences and in government, use it far to excess. Allow me to illustrate what it is, and what is the alternative.

- Passive Voice: when [something] is done by [someone]
- Active Voice: when [someone] did [something]

<u>PASSIVE</u>: In what might be called a revolt, grades earned by angered students were taken to the tired ombudsman. A plan of equitable settlement was conceived such that the ill-considered criteria would get altered and the old scores revised, based on standards that were agreed upon to be contracted with a syllabus clause in which the exact requirements could be specified. The unexpected result of this being done was that even more protest was raised after new procedures were misunderstood, so that grades were reduced further once recalculated and returned.

Can you really tell who <u>is doing</u> [that previous verb is future perfect, *not* passive voice] what? Nineteen passive verbs in three run-on sentences *IS* excessive, and I argue that much of the meaning failed to transfer. Try it again:

<u>ACTIVE</u>: In a revolt, angry students took the grades that they received to the ombudsman. Despite fatigue, that official conceived a plan to equitably alter the dissatisfying criteria and resultant scores. The instructor would specify exact requirements as a contract clause in the syllabus, and revise the grades. However, no one anticipated that this would reduce grades further, and student protest grew even louder upon reposting.

See? Twenty-five percent shorter (88 down to 65 words), yet now you know much more clearly WHO did WHAT, and WHEN. The active voice also forced the author to clarify those run-on sentences.

Passive voice also includes verbs that you use as noun modifiers (e.g., "<u>angered</u> students--WHO angered them?), or the implicit form of passive voice that lacks a "was", "got" or "by" (e.g., "...grades <u>based</u> on..."—WHO did the basing?). Grammar-checkers usually do not detect any of these forms. In that abysmal paragraph above, my word processor (set to "formal" grammar) found only six passive verbs and claimed that no sentences were passive. Stupid machine; use *your* human brain!

Any time more than 20% of your verbs are passive, you have probably crossed into the realm of unclear communication. I suspect that two subconscious motivations account for why this happens. First, the writer is uncertain about the statement's validity, and seeks to avoid making an absolute commitment. That contradicts the very purpose of professional communication. Make your points in the declarative, and if you are wrong, be wrong boldly. Do not be an evasive, timid weasel. The other reason for too much passive voice I suspect is the widespread aversion to speaking in first person, perhaps also due to fear of commitment. John Fraser Hart, a superb writer and former AAG <u>Annals</u> editor, made a valid point when he encouraged people who had done something to simply say, "I did it." To artificially force statements into the third person ("It was done by me") adds nothing but extra verbiage, with no gain in content communication.

My other stylistic object of ire is the employment of tiresome meaningless phrases, and often extensive strings of them. With not entirely facetious interpretations, look through (and AVOID) the trite phony bologna expressions on my Carlinesque list below. These add nothing to your communication effort! Incidentally, note the frequency of passive voice in the vacuous nonsense (phrases to avoid) on the left side.

Scholarly Pretensions: A Cynic's Guide to Translating Research Lingo

WHEN THEY SAY	THEY <i>APPEAR</i> TO MEAN	
It has long <mark>been known</mark> that	I never bothered to look it up	
of great theoretical and practical value	I personally find it interesting	
This method was chosen as especially suitable	The guy at the next desk could do it for me	
High purity		
Very high purity	I don't know what the hell is in this stuff,	
Extremely high purity	except for the exaggerations on the manufacturer's label	
Super-purity		
Referentially pure		
a fiducial reference line	I measured from a scratch that I made	
Ten samples were chosen for detailed study	My other fifty samples made no sense so I'm not telling you about them	
were handled with utmost care during analysis	they never hit the floor	
Typical results are shown	These are the best that I got	
Although some detail was lost in the reproduction, it is clear in the original image that	I screwed up the copying so badly that it now is impossible to tell	
Presumably at longer times and with more study	I never did find out, but finance me some more and I'll keep looking	
The accuracy of our model is		
• excellent	• fair	
• good	poordoubtful	
satisfactoryfair	imaginary	
as good as can be expected	I have to say something	
My results will be reported later	Maybe I'll actually do this some time	
The most reliable values are Jones'	Jones is a friend of mine	

It <mark>is believed</mark> that	
It <mark>is suggested</mark> that	I think
It may be that	
It is generally believed that	I disagree
It is clear that much additional work will be required before understanding	I have no idea of what happened here
Unfortunately, a theory to account for these effects has not been formulated	and nobody else knows either
correct within one order of magnitude	completely wrong
It is hoped that further work will be stimulated by this report	This paper isn't too good, but nobody else's is any better
Thanks are given to Dick for assistance and Jane for valuable discussions	Dick did all the work and Jane interpreted what it means

I very well may be that instructor above who will provoke the grade rebellion, but after reading this you have fair warning as to the criteria that I will employ and the deficiencies that I will watch for!

Gram and Gramp thrived well before "Generation Text", the latter of which in my experience is none too good with either prepositions or capitalization. For some examples just this past semester, I personally sense that there is a noticeable difference between getting a melted candle stuck on my nose as opposed to up my nose. Then there is, "We helped our Uncle Jack off his horse"; reduce the capitals to lower case and I detect a significant communications lapse. Your spell/grammar checker will not catch these, because that two pounds of copper and plastic has no more brains than a bowling ball. Smarts is your job!

The excerpts below are from Richard Lederer's More Anguished English (Delacorte Publishing, 1992). Lederer's idea was to synthesize a "new" world history from students' essay exam bloopers. These gems are real. Below is a sample of how NOT to do it. Guaranteed to offend most audiences, and also make you look the fool. PROOFREAD YOUR WORK!!!!!

- "Ancient Egypt was inhabited by mummies and they all wrote in hydraulics. They lived in the Sarah Dessert and traveled by Camelot. The climate of the Sarah is such that the inhabitants have to live elsewhere, so certain areas of the dessert are cultivated by irritation. Early Egyptian women wore a garment called a calasiris. It was a sheer dress which started beneath the breasts which hung to the floor. The Egyptians built the Pyramids in the shape of a huge triangular cube. The Pyramids are a range of mountains between France and Spain.
- "The Bible is full of interesting caricatures. In the first book of the Bible, Guinesses, Adam and Eve were created from an apple tree. One of their children, Cain, asked "Am I my brother's son?" Jacob, son of Isaac, stole his brother's birthmark. Jacob was a patriarch who brought up his twelve sons to be patriarchs, but they did not take to it. One of Jacob's sons, Joseph, gave refuse to the Israelites.

[&]quot;Pharaoh forced the Hebrew slaves to make bread without straw. Moses led them to the Red Sea, where they made unleavened bread, which is bread made without any ingredients. Afterwards, Moses went up on Mount Cyanide to get the Ten Commandments. David was a Hebrew king skilled at playing the liar. He fought the Philatelists, a race of people who lived in Biblical times. Solomon, one of David's sons, had 500 wives and 500 porcupines.

- "The Greeks were a highly sculptured people and without them we wouldn't have history. The Greeks also had myths. A myths is a female moth. One myth says the mother of Achilles dipped him in the River Stynx until he became intolerable. Achilles also appears in 'The Iliad' by Homer who also wrote 'The Oddity', in which Penelope was the last hardship Ulysses endured on his journey. Actually, Homer was not written by Homer but by another man of that name.
- "Socrates was a famous Greek teacher who went around giving people advice so they killed him. Socrates died of an overdose of wedlock and after his death his career suffered a dramatic decline.
- "In the Olympic Games, Greeks ran races, jumped, hurled the biscuits, and threw the java. A coral garland was the prize.
- "The government of Athens was democratic because the people took the law into their own hands. There were no wars in Greece, because the mountains were so high that they couldn't climb over to see what their neighbors were doing. When they fought the Parisians, the Greeks were outnumbered because the Persians had more men.
- "Eventually, the Ramons conquered the Greeks. History called these people Romans because they never stayed in one place for very long. Julius Caesar extinguished himself on the battlefields of Gaul. The Ides of March killed him because they thought he was going to be made king. Nero was a cruel tyrant who would torture his poor subjects by playing the fiddle to them.
- "Later came the Middle Ages, when everyone was middle-aged. King Alfred conquered the Dames, King Arthur lived in the Age of Shivering, King Harold mustarded his troops before the Battle of Hastings and Joan of Arc was burnt to a steak and was canonized by Bernard Shaw. Victims of the blue-bonnet plague grew boobs on their necks and the Magna Carta provided that no free man should be hanged twice for the same offense.
- "In midevil times most people were alliterate. The greatest writer of the futile ages was Chaucer, who wrote many poems and verses and also wrote literature. Another story was about William Tell who shot an arrow through an apple while standing on his son's head.
- "The Renaissance was an age when more individuals felt the value of their human being. Life reeked with joy. Martin Luther was nailed to the church door at Wittenberg for selling papal indulgences. He died a horrible death being excommunicated by a bull. It was the painter Donatello's interest in the female nude that made him the father of the Renaissance.
- "The greatest writer of the Renaissance was William Shakespeare; he was born in the year 1564 supposedly on his birthday. He never made much money and is famous only because of his plays. He lived in Windsor with his merry wives, and wrote tragedies, comedies, errors, and hysterectomies, all in Islamic pentameter. In one play, Hamlet rations out his situation by relieving himself in a long soliloquy. Romeo and Juliet are an example of a heroic couplet. Writing at the same time was Miguel Cervantes, who wrote "Donkey Hote". John Milton wrote "Paradise Lost""; then his wife died and he wrote "Paradise Regained".
- "The government of England was a limited mockery. Henry VIII found walking hard because he had an abbess on his knee. Queen Elizabeth was the "Virgin Queen"; as a queen she was a success. When she exposed herself before her troops, they all shouted "hurrah"; then the navy went out and defeated the Spanish Armadillo. Sir Frances Drake circumcised the world with a 100-foot clipper.
- "During the Renaissance America began. Columbus was a great navigator who discovered America while cursing about the Atlantic. Later the Pilgrims crossed the ocean, and this was called the Pilgrim's Progress. Many people died, which proved very fatal to them, and many babies were born. Captain John Smith was responsible for all this.
- "The Enlightenment was a reasonable time. It was an age of great inventions. Gutenberg invented removable type and the Bible. Voltaire invented electricity and wrote "Candy". Sir Isaac Walton invented gravity; it is chiefly noticeable in Autumn, when apples are falling. Another important invention was the circulation of the blood.
- "Bach was the most famous composer in the world, and so was Handel. Bach died from 1750 to the present. Handel was half German, half Italian, and half English. Beethoven wrote music even though he was deaf; he was so deaf he wrote loud music. He took long walks in the woods even when everyone was calling for him. Beethoven expired in 1827, and later died for this.
- "One cause for the Revolutionary War was the English put tacks in their tea. Also, the colonists would put parcels through the post without stamps. Finally, the colonists won the war and no longer had to pay for taxis. Delegates from the original thirteen states formed the Contented Congress. Then the Constitution was adopted to secure domestic hostility, and the people enjoyed the right to keep bare arms. Thomas Jefferson, a Virgin, and Benjamin Franklin were two singers of the Declaration of Independence. Franklin invented electricity by rubbing cats backwards, and declared "a horse divided against itself cannot stand." Franklin died in 1790, and is still dead.
- "In the 19th Century people stopped reproducing by hand and started reproducing by machine. The invention of the steamboat caused a network of rivers to spring up. Cyrus McCormick invented the McCormick raper which did the work of a hundred men. Samuel Morse invented a code for telepathy. Charles Darwin wrote the "Organ of the Species". Louis Pasteur invented a cure for rabbis. Madman Curie discovered radio, and Karl Marx became one of the Marx brothers.
- "The sun never set on the British Empire because the British Empire is in the east and the sun sets in the west. Abraham Lincoln became America's greatest Precedent and was born in a log cabin he built with his own hands. He wrote the Gettysburg Address while traveling from Washington to Gettysburg on the back of an envelope. He also freed the ex-Negroes by signing the Emasculation Proclamation. Then the First World War, caused by the assignation of the Arch-Duck by a surf, ushered in a new error in the anals of human history.

Cross me not. I'll figuratively slide you down a thirty-foot razor blade into a pool of rubbing alcohol. Please do not make us appear stupid. *You* deserve better.

These are from a book called 'Disorder in the American Courts' and are things people actually said in court, word for word, taken down and now published by court reporters that had the torment of staying calm while these exchanges were actually taking place.

ATTORNEY: This myasthenia gravis, does it affect your memory at all?

WITNESS: Yes.

ATTORNEY: And in what ways does it affect your memory?

WITNESS: I forget.

ATTORNEY: You forget? Can you give us an example of something you forgot?

ATTORNEY: Now doctor, isn't it true that when a person dies in his sleep, he doesn't know about it until the next

morning?

WITNESS: Did you actually pass the bar exam?

ATTORNEY: The youngest son, the twenty-year-old, how old is he?

WITNESS: He's twenty, much like your IQ.

ATTORNEY: Were you present when your picture was taken?

WITNESS: Are you shitting me?

ATTORNEY: She had three children, right?

WITNESS: Yes.

ATTORNEY: How many were boys?

WITNESS: None.

ATTORNEY: Were there any girls?

W ITNESS: Your Honor, I think I need a different attorney. Can I get a new attorney?

ATTORNEY: How was your first marriage terminated?

WITNESS: By death.

ATTORNEY: And by whose death was it terminated?

WITNESS: Take a guess.

ATTORNEY: Can you describe the individual?

WITNESS: He was about medium height and had a beard.

ATTORNEY: Was this a male or a female?

WITNESS: Unless the Circus was in town I'm going with male.

ATTORNEY: Is your appearance here this morning pursuant to a deposition notice which I sent to your attorney?

WITNESS: No, this is how I dress when I go to work.

ATTORNEY: Doctor, how many of your autopsies have you performed on dead people?

WITNESS: All of them. The live ones put up too much of a fight.

ATTORNEY: ALL your responses MUST be oral, OK? What school did you go to?

WITNESS: Oral.

ATTORNEY: Do you recall the time that you examined the body?

WITNESS: The autopsy started around 8:30 p.m. ATTORNEY: And Mr. Denton was dead at the time? WITNESS: If not, he was by the time I finished.

ATTORNEY: Are you qualified to give a urine sample? WITNESS: Are you qualified to ask that question?

ATTORNEY: Doctor, before you performed the autopsy, did you check for a pulse?

WITNESS: No.

ATTORNEY: Did you check for blood pressure?

WITNESS: No.

ATTORNEY: Did you check for breathing?

WITNESS: No.

ATTORNEY: So, then it is possible that the patient was alive when you began the autopsy?

WITNESS: No.

ATTORNEY: How can you be so sure, Doctor?

WITNESS: Because his brain was sitting on my desk in a jar.

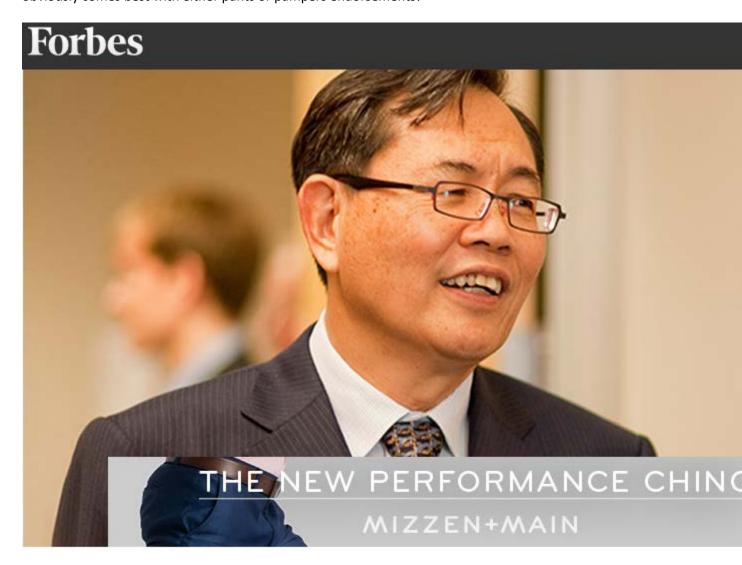
ATTORNEY: I see, but could the patient have still been alive, nevertheless? WITNESS: Yes, it is possible that he could have been alive and practicing law..

Scientists and government officials are not alone in sometimes obtuse communication. The gems above are from wordsmiths of the legal profession. Sometimes I think that the only difference between a truckload of lawyers and a truckload of bowling balls is that you'll probably bend your pitchfork on the bowling balls...

 $www.amazon.com/Disorder-American-Courts-Quotes-Proceedings/dp/069227457X/ref=sr_1_2? s=books\&ie=UTF8\&qid=1410834442\&sr=1-2\&keywords=disorder+in+american+courts$

Guess who, and by what profession, are two of the richest people in

America? http://www3.forbes.com/lists/the-richest-person-in-americas-50-largest-cities/22/ and http://www3.forbes.com/lists/the-richest-person-in-americas-50-largest-cities/22/ and http://www3.forbes.com/lists/the-richest-person-in-americas-50-largest-cities/42/. Of course, success obviously comes best with either pants or pampers endorsements!



Kansas City, MO

Name: Min Kao

Net Worth: \$2.1 B

Origin of Wealth: Navigation Equipment



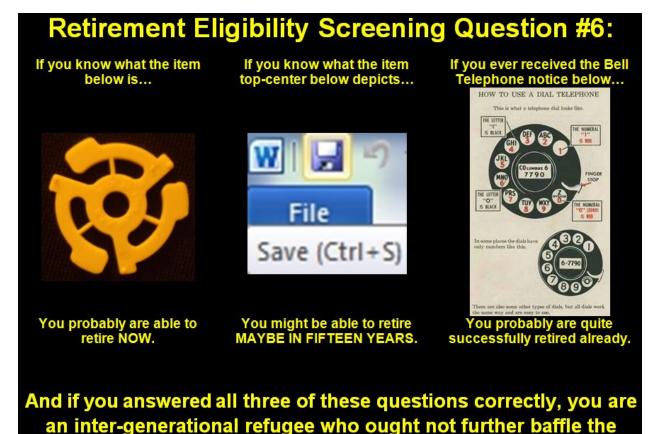
Riverside, CA

Name: Jack Dangermond

Net Worth: \$3.1 B

Origin of Wealth: Mapping Software

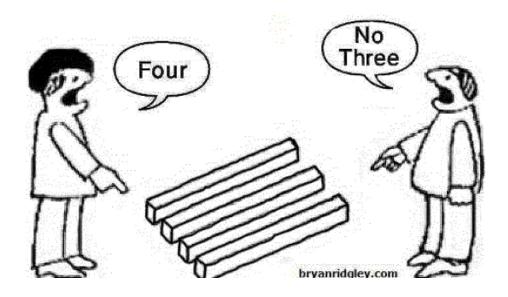
One last insight; I am of a different geographic origin and era than you.



Reality can be so complex that equally valid observations

from differing perspectives can appear to be contradictory.

contemporary managers of your Social Security Administration.



NEWS LINKS

Central Wisconsin Weather Closings

Cable News Network	International News Links
Christian Science Monitor	International Live Radio
Fox News Network	Toronto Globe & Mail
MSNBC	Central Time/Daylight
National Public Radio	Earthweek Map
USA Today	Environmental News Network
U. S. Federal Register	Science Daily Briefs
Chronicle of Higher Education	National Weather Service
east-Washington Post	University Financial Aid
north-Minneapolis Star Tribune	UWSP Career Services
south-Dallas Morning News	UWSP OSCAR
west-San Francisco Chronicle	UWSP News Services
The Wheeler Report	UWSP Internships
Stevens Point Journal	UWSP Student Employment
Wisconsin State Statutes	Conversion Utilities

ATMOSPHERIC WEB LINKS

WPC Weather Maps	UWSP Schmeeckle Reserve Station	Historical Daily Weather Map Archive 1871-present
Weather Channel Current	Current USA Warnings	Wisconsin State Patrol Road Conditions

Weatherbug Cameras	Weather Underground: Wisconsin	Weather Glossary
USAF Reserve Hurricane Hunters	The Tornado Project	NWS Norman OK Storm Spotter Guide
USFS Wildfire Status Maps	North America Snow/Ice Cover	Sea Surface Temperatures
World Climates	NOAA Coastal	Wisconsin State Climatology Office