<table>
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<tr>
<th>PROJECT</th>
<th>LOCATION</th>
<th>PURPOSE AND PROJECT ELEMENTS</th>
<th>GRADED ELEMENTS</th>
<th>POINTS</th>
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</table>
| Exercise 1: Stratigraphic section description | Clark's Fork Canyon, Clark, WY; Mesozoic strata | * describe and name sedimentary rocks  
* describe and interpret contacts between beds  
* recognize and describe interbedding of various lithologies  
* describe and measure a sequence of rocks  
* construct columnar stratigraphic section | * measurement and description of a sequence of Jurassic strata, using Jacob staff  
* constructed columnar stratigraphic section | 10 | TBA; in field |
| Exercise 2: Traverse map (and cross-section); Geologic Bedrock Map 1 | Sheep Mountain Anticline, north of Greybull, WY | "to locate yourself on a map and in the field  
* read topographic contours. "correlate between ground truth and the contour patterns on the map.  
* scan and practice traversing and traverse mapping  
* practice establishing stratigraphy  
* practice recognizing structural relations in field  
* map the geometric complexities of folded terrains  
* draw an accurate geologic cross-section | * geologic map of the Sheep Mountain region  
* structural cross-section along given line A-A' | 15 | TBA; in field |
| Exercise 3: Pace & Compass and Surficial Geologic Map 1 | Mud Hen Butte, northwest of Powell, WY | * become proficient with the Brunton compass to take bearings and shoot angles.  
* create a recommendable map of a small area using only the resources at hand.  
* learn to take good field notes that are useful at a later time.  
* map surficial geologic units, and understand the stratigraphy of surficial rock units. | * primary control loop, at scale 1:600 containing: initial primary control loop, with bearings and distances; the error of closure, in bearing and distance; the corrected location of each point; and the corrected control loop  
* control base map, at scale 1:1000: showing the locations of all control points (with sight lines).  
* geologic map on field created control base map | 10 | TBA; in field |
| Exercise 4: Topographic surveying; geomorphology; Surficial Geology Map 2 | South end of Rattlesnake Mountain Anticline, South of Cody, WY | * make a controlled base map using plane table, altidude and total station;  
* learn to contour set of points in the field;  
* observe how topography influences expression of geologic units on map;  
* distinguish bedrock and surficial units by their topographic expression. | *contructed topographic map of area.  
*geologic map overlay on field constructed topographic map | 15 | TBA; in field |
| Exercise 5: Elk Basin Oil Field, WY; Geologic Bedrock Map 2 | Elk Basin Oil Field, WY | * construct a geologic map using traversing methods.  
* understand the geometries of faulted rock bodies, and the geometric complexities that result from faulting.  
* understand how faulting and folding are interrelated and affect each other.  
* learn how to extrapolate critical relations to large areas | * geologic bedrock map  
* structural cross-section along given line A-A' | 20 | TBA; in field |
| Exercise 6: Heart Mountain Fault; Geologic Bedrock Map 3 | Dead Indian Hill, Chief Joseph Highway | * construct a geologic map using traversing methods.  
* identifying relationship between bedrock from soil types  
* understand the geometries of faulted rock bodies, and the geometric complexities that result from faulting.  
* understand how faulting and folding are interrelated and affect each other.  
* learn how to extrapolate critical relations to large areas | * geologic bedrock map  
* structural cross-section along given line A-A'  
* presentation explaining the structural geology in the map area, and giving the sequence of geologic events in the evolution of the area | 20 | TBA; in field |
| Attitude and Improvement | | * gain intellectual independence and individual initiative  
* maintaining drive and intellectual effort  
* helping and cooperating on teams  
* helping with group effort  
* maintaining safe practices in field work | * instructor and peer evaluation of group and partner participation, maintaining safety in field, individual improvement, soft skills, etc | 10 | ongoing |

TOTAL FIELD EXERCISES 100

Unless otherwise directed, all exercises must be completed in the field and will be collected each day as we leave the field. Grading of exercises will include evaluation of accuracy, graphics, neatness, as well as a peer evaluation of teamwork and partner safety.

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<th>WORK DUE AFTER CAMP</th>
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| Stratigraphic column | * Comprehensive stratigraphic section, combining data from literature with contributions from all exercise locations including Clark's Fork Canyon, Sheep Mountain, Mud Hen Butte, Rattlesnake Mountain, Elk Basin, and Dead Indian Hill.  
* Section should summarize all the stratigraphic, lithologic, faunal and other information you collected via outcrop studies throughout the field camp. | 10 | 1-Sep |
| Field notebook | Material graded includes:  
* Completeness of the notes taken  
* Continuity of the notes throughout the summer, an entry for every day, an entry for every project  
* Includes material specifically instructed to enter in the notebook.  
* Use of sketches, drawings, maps, tables of data, columnar section representation of information | 10 | 1-Sep |
| Final report | Comprehensive discussion of:  
* general geologic setting  
* geomorphology and geomorphic history of the area.  
* discussion of the Phanerozoic stratigraphy of the area.  
* discussion of the structural geology and tectonic framework of the area you choose.  
* analysis and interpretation of the geologic relations you mapped in one of the major map areas.  
* discussion of some geologic feature we examined at any point during the summer, something that caught your interest or piqued your curiosity.  
* generalized geologic history, and sequence of geologic events, of the Wyoming region.  
* proper and citation of references. | 20 | 1-Sep |

TOTAL POST-CAMP WORK 40

| TOTAL POSSIBLE POINTS | | |
|-----------------------| | 140 |