• **Biology:**

Your instructor has 3 flasks of E.coli and 3 flasks of Tetrahymena, each with a different cell density. Select one flask of each cell type and record its identification number. Transfer 1 ml of each cell type to different test tubes, and fix the Tetrahymena by adding 1 ml of formaldehyde. (NOTE: Do NOT pipette by mouth.) First count the Tetrahymena. Position the hemocytometer on the microscope stage and adjust the objective so you are focused on the grid lines. With a Pasteur pipette and rubber bulb gently resuspend the cells and transfer a drop to each side of the hemocytometer. Count the number of cells in the 4 A squares plus the central C square and average them by dividing by 5. How do the numbers of the two sides compare?

• **Chemistry:**

Procedure: Place a 50 mL beaker containing 20 mL of distilled water and a magnetic stirring bar on the magnetic stirrer, and adjust the rate of stirring so it is vigorous but not turbulent. Add about 1 mL of AgNO3 solution and allow time for complete mixing. Add dropwise in sequence the following solutions until a change is clearly observed. This will generally be 0.5-1.0 mL (10-20 drops): NaHCO3, NaOH, NaCl, NH3, NaBr, Na2S2O3, KI, and Na2S. - Write down your observations (color, state, etc.).

• **Methods in Teaching:**

A) Write a “Target Student Report.” This will be a 3-page paper describing a specific, targeted student. Write the report as a “profile,” and include your perceptions of the student’s strengths, weaknesses and particular needs. Interviews with student and teacher required.

B) Conduct a substantial interview with a successful, practicing English or Language Arts teacher. Submit findings as a 3-page report. Include the following topics:
   - How to meet CCSS.
   - Effective approaches to teaching literature.
   - Effective approaches to teaching writing.
   - Effective uses of technology in or outside the classroom.
   - Effective classroom management techniques

• **Creative Writing, Fiction:**

A) Read Flannery O’Connor’s “A Good Man is Hard to Find.” In journals, describe five salient characteristics of the grandmother and five of the “Misfit.”

B) Read Chapter Five of *Fiction Writers Workshop*, “Character,” and complete one of the exercises at the end of the chapter.

• **Math**
A) Let $X$ be a nonempty set and let $Y$ be the set of all subsets of $X$. Show that there is no bijection from $X$ to $Y$. (A bijection from $X$ to $Y$ is a function $f : X \to Y$ with the following two properties: (i) for any $a,b \in X$, if $a \neq b$, then $f(a) \neq f(b)$ AND (ii) for any $d \in Y$ there exists at least one $c \in X$ such that $f(c) = d$.)

B) You are a ship navigator back in the old days when clocks were the only way to measure longitude. If your expensively constructed clock has lost 10 minutes after, say, a sea voyage of 1 month, by roughly how many degrees will you be in error about your longitude? More importantly, by roughly how many miles will you be in error about your position? Should you be worried? (Assume that you are at 45° latitude.)

- **Geography**

Answer FIVE (and only FIVE) of the following short answer questions. Please label your responses. The questions are worth 8 points each. They can all be answered in a paragraph or in short lists.

A) 1) According to Sjoberg and others, what were the characteristics of the first cities?

2) What do cities gain through globalization? What do cities lose through globalization?

3) What did Christaller contribute to urban geography?

4) Define and provide examples of the types of blight.

5) What kinds of offices are ‘footloose’? How does their geography differ from ‘market’ types of office?

6) What are basic and non-basic functions? How do they impact the economies of cities like Butte, MT?

7) What is social area analysis?

8) Describe ONE of the following land use models: concentric zone, sector, or multiple nuclei.

B) Answer TWO (and only TWO) of the following essay questions. Please label your responses. Each question is worth 30 points. This section is worth 60 points total. You may use lists, diagrams, etc. to communicate your responses.

1) How has technology shaped the evolution of cities?

2) What are the research approaches/paradigms of urban geography? Discuss examples of how topics from the first half of the semester relate to those approaches/paradigms.

3) What are the key things that you need to know in order to understand the geography of retail?

- **Cinematography 465**

Write on each of the following topics (approximately 2 pages per topic). Your total writing for the exam will be about 6 pages. You may write on any of the films. It’s always a good idea to review some or all of the films that you write on. Topic 1 deals with one film. Topics 2 and 3 deal with two films each. You may choose to write on the same film for two of the topics, but not for all three. So you will be writing on 4 or 5 films for this exam. Feel free to refer to any outside research you may find, although that isn’t necessary for the exam. You will need to refer to articles from Blackboard for two of these questions.

- **Statistics**
Instructions: Please solve the following exercises using MATLAB. One simple way to present your solutions is to copy all of your code and results (plots, numerical answers, etc.) into a Word document, which you should submit in class. There is no online submission.

A) Write a MATLAB script that calculates the mean and median of a sample of 100 uniform random numbers between 0 and 2 and the percentage of points in the sample that are greater than 1.

B) a. Generate a vector of 1000 Poisson random numbers with $\lambda = 2$.
   b. Make a histogram and a boxplot of the 1000 numbers from part (a).

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**Anthropology**

Two of these are lab-like write-ups of craft projects; each will be worth 15%.

A) Without consulting any textual (including on-line) sources, type up clear and complete instructions for something you know how to make that you consider to involve craft practice and which doesn't require super-specialized equipment (e.g., rudiments of knitting, a recipe for cooking or baking, origami folding, etc.). Bring a hard copy to class. (You'll then exchange papers and implement someone else's instructions.)

B) Assignment 2

Write a three-page essay reflecting on what week five's readings on skill and tacit knowledge add to our historical discussions of the previous weeks; do not try to address every reading but instead focus on what you see as key arguments and insights.

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**Journalism**

Interview 2 members of the same discourse community but differing along some variable: e.g. age, class, linguistic background, level of education, etc. Report detailed observations re the differences you have discovered. Hypothesize the reasons, relying on our textbook readings.

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**Intro into Music Theory**

Listen to two excerpts. Using the theoretical framework in Borguis (1978), hypothesize (roughly) when the pieces were composed. Defend your point of view.

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**Linguistics**

Read the following article:
Holowka, Siobhan, Francoise Brosseau-Lapré, et al. "Semantic and Conceptual Knowledge Underlying Bilingual Babies' First Signs and Words." Language Learning 52, no. 2 (2002): 205–62. For this assignment, consider the claim made by the authors with respect to how infants exposed to two languages acquire the meanings of words in their two languages. Consider the experimental evidence advanced to support their hypotheses. Do you think that they have made their case? Does the experimental design provide an appropriate test for the hypothesis? If yes, why? If no, why not? What do the results tell us about simultaneous acquisition of two languages with respect to the learning of word meaning?

Write a critical review of this study. Develop your arguments in a 2–4 page paper about 500–1000 words. If you have lots to say, you may go beyond the limits.

- World Literature

The last paragraph of Achebe’s Things Fall Apart reads:

“The Commissioner went away, taking three or four of the soldiers with him. In the many years in which he had toiled to bring civilization to different parts of Africa he had learned a number of things. One of them was that a District Commissioner must never attend to such undignified details as cutting a hanged man from the tree. Such attention would give the natives a poor opinion of him. In the book which he planned to write he would stress that point. As he walked back to the court he thought about that book. Every day brought him some new material. The story of this man who had killed a messenger and hanged himself would make interesting reading. Once could almost write a whole chapter on him. Perhaps not a whole chapter, but a reasonable paragraph, at any rate. There was so much else to include, and one must be firm in cutting out details. He had already chosen the title of the book, after much thought: The Pacification of the Primitive Tribes of the Lower Niger."

Think of 2 major points that the paragraph makes (subtly or not; perhaps explicitly or by inference). You may be drawn to ironic statements or contradictions of earlier material. Briefly explain the two points you take from this paragraph that lend it significance to the novel.

UDL Workshop, CCSU

March 31, 2015

Instructions:
- In groups, choose 3 different areas of study from the list below. Avoid your own field.
- Find inherent ability biases in the assignments you have chosen and suggest solutions. What abilities do these assignments assume students will have?
- Find your own field below. Repeat the process. Any remaining challenges?