<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 01/21/10</td>
<td>Th  How do I ask a question?</td>
<td>Ch.1 (1.5-1.8); <a href="http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookTOC.html">http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookTOC.html</a></td>
</tr>
<tr>
<td>2 01/26/10</td>
<td>Tu  What am I?</td>
<td>Ch.1 (1.1-1.4)</td>
</tr>
</tbody>
</table>
| 3 01/28/10 | Th  What am I made of?                                                | Ch.2 (2.1, 2.3 - 2.5); Ch.3; [http://www.johnkyrk.com/H2O.html](http://www.johnkyrk.com/H2O.html)  
[http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookCHEM2.html](http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookCHEM2.html) |
| 4 02/02/10 | Tu  Movement Vocabulary and Devices                                    |                                                                        |
| **5 02/04/10** | **Th  Project I show (Hydrophobic); More water**                    | Ch.2 (2.5-2.6)                                                          |
| 6 02/09/10 | Tu  What is DNA?                                                       | Ch.3 (3.7); Ch.13 (13.1, 13.2); Ch.9 (9.1); Ch.12 (12.1); [http://www.dnaftb.org/](http://www.dnaftb.org/) (Go to Molecules of Genetics) |
| 8 02/16/10 | Tu  — how is it protected?                                            | [http://highered.mcgraw-hill.com/sites/0072835125/student_view0/animations.html](http://highered.mcgraw-hill.com/sites/0072835125/student_view0/animations.html) |
| 9 02/18/10 | Th  What are Proteins?                                                | Ch.3 (3.5, 3.6); [http://webhost.bridgew.edu/forga/proteins/default.html](http://webhost.bridgew.edu/forga/proteins/default.html)  
[http://www.johnkyrk.com/aminoacid.html](http://www.johnkyrk.com/aminoacid.html); Ch.14 |
| 10 02/23/10| Tu  — how are they made contd.                                        | [http://www.dnai.org/a/index.html](http://www.dnai.org/a/index.html) (DNA movie assignment due) |
| 11 02/25/10| Th  — how do they work?                                               | *Ch.36 (36.4-36.11); [http://www.pdb.org/pdb/motm.do](http://www.pdb.org/pdb/motm.do) (Review problem set due) |
| 12 03/02/10| Tu  Mid-term I                                                         | In-class exam on topics covered from 01/21/10 - 02/18/10               |
| 13 03/04/10| Th  Project II show (Mutant); More dance                              |                                                                        |
|            | Spring Break                                                         |                                                                        |
| 14 03/23/10| Tu  What about Sugar and Fat?                                         | Ch.3 (3.3, 3.4)                                                        |
| 15 03/25/10| Th  — what are they good for?                                         | Ch.8 (8.1-8.5, 8.8); Ch.5 (5.1-5.4); [http://www.johnkyrk.com/cellmembrane.html](http://www.johnkyrk.com/cellmembrane.html) |
| 16 03/30/10| Tu  Structuring games                                                 |                                                                        |
| **17 04/01/10** | **Th  Project III showing (Mitosis)**                               |                                                                        |
| 18 04/06/10| Tu  Project III discussion; sugars/fats review                        | Project III Critical Reflection due                                    |
| 19 04/08/10| Th  What is the source of energy for life?                            | Ch.6 (6.1-6.3, 6.5)                                                    |
| 20 04/13/10| Tu  — how is it made/used?                                            | Ch.7 (7.1-7.6); Ch.8 (8.1-8.5, 8.8)  
| 21 04/15/10| Th  What is a cell?                                                   | Ch.4                                                                   |
| 22 04/20/10| Tu  How do cells grow and reproduce?                                  | Ch.9; Ch.10                                                            |
| 23 04/22/10| Th  Midterm II                                                        | In-class exam on topics covered from 02/23/10 - 04/13/10              |
| 24 04/27/10| Tu  What happens when cells lose control?                             | Ch.9                                                                   |
| 25 04/29/10| Th  How do I ask a question?                                          |                                                                        |
| **26 05/04/10** | **Tu  Project IV showing (draft of final project)**                 |                                                                        |
Movement Assignment I: Hydrophobic Interaction; Due on Thursday 02/04/10
Create a group movement study that depicts hydrophobic interaction. Gather information on the topic as necessary. Experiment with a few different ways of modeling the process to see which is most effective. Be sure to consider and incorporate as many details as possible. Let the specific process guide your movement choices.

The movement study should be between 30 to 90 seconds in length.

Each student must submit a 2-page double-spaced written reflection.

General information about movement assignments

Workgroups:
Each student will belong to a workgroup of 6-7 members for the semester. You will need to find time to meet as a group outside of class to complete five Group Movement studies, which will be assigned over the course of the semester. You will show the movement studies in class, and submit individual written critical reflections describing your work (due on the same day as the showing). The final group movement study will be performed during finals week.

When working with your group, choose a space that allows for movement. Dance studios may be reserved for these meetings. Dance studios, including the Fayerweather Dance and Theater Studios, the CFA Dance studio and the Schonberg Dance Studio are available through ‘ROOM REQUEST’ in your e-portfolio (be sure to write that this is for a dance department course). The schedules are posted weekly on the Dance Bulletin Board in the foyer of the CFA Theater and Dance Building. It is your responsibility to find a time that works for all group members (I suggest planning ahead). Attendance in these sessions is mandatory.

Guidelines and assessment for group movement studies and written reflections:
Movement studies will be evaluated on three criteria: 1) The incorporation and accuracy of scientific material in movement; 2) The utilization of varied movement vocabulary, compositional devices and elements of movement (space, time, energy, weight) introduced in class; and 3) Your 2 page written critical reflection, which should describe the scientific material addressed, describe the process by which you translated the material into movement, and include your assessment of the effectiveness and overall effect of the translation. Your writing should demonstrate how your creative choices are informed by your knowledge of subject matter.
Movement Assignment II: Group Form; Due on Thursday 03/04/10

Focus on various ways of creating group formations in space and time. Experiment together to find ways of moving in group patterns. Experiment with traveling in spatial patterns, in lines, in circles, in a clump, utilizing levels; experiment with creating group shapes, both still and in motion; experiment with varying dynamics, tempo and movements to create group formations that are evocative. Try dancing/moving in unison, with alternating groups taking turns moving, or in sequential fashion. Notice the different possibilities that result as your group takes on different spatial relationships.

For this assignment you will focus on the topic—Mutant. Using between three and five group movements/forms compose a movement study that engages with this topic beyond a superficial level. Make sure to incorporate knowledge gained from this course. Make smooth transitions between sections, and be sure to have a beginning, middle and end.

Make it simple! Keep it under 3 minutes long. Include everyone in the process and practice the sequence until everyone knows it and can perform it comfortably.

Each student must submit a written reflection.

Guidelines and assessment for group movement studies and written reflections:
Movement studies will be evaluated on three criteria: 1) The incorporation and accuracy of scientific material in movement; 2) The utilization of varied movement vocabulary, compositional devices and elements of movement (space, time, energy, weight) introduced in class; and 3) Your 2 page written critical reflection, which should describe the scientific material addressed, describe the process by which you translated the material into movement, and include your assessment of the effectiveness and overall effect of the translation. Your writing should demonstrate how your creative choices are informed by your knowledge of subject matter.
MEANING MAKING IN DANCE
Movement Assignment III; Due on Thursday 04/01/10

The first group project was intended to get you to begin thinking about ‘translation’ into movement.
The second group project was intended to get you to experiment consciously with ‘form’, with basic elements of movement (space, time, energy), and the idea of movement vocabularies.
In the third group project we would like you to consider the purpose, framing, and modes of representation, that are possible in dance choreography and performance.
For this assignment, the topic will be Mitosis.

In what way are you communicating to your audience? Are you:
- Teaching them something?
- Telling them a story?
- Demonstrating or modeling something?
- Conveying an emotion or a state (empathy)?
- Commenting on, or critiquing something?
- Giving them something?
- Other…

What is the dancing body?
- A person, a community?
- A shape, a medium for displaying forms?
- An assemblage of cells, or molecules, or body systems?
- Energy?
- Flow through space?
- Other…

Compositional structuring in dance: By what logic are you arranging and putting movement in sequence? Are you:
- Telling a story?
- Creating episodes or snapshots?
- Presenting different perspectives on one topic? (theme and variation)
- Demonstrating a process?
- Other…

What is your movement vocabulary?
The movement vocabulary does not have to have a name. It just signifies the kind of movement you are using. It could be as simple as ‘using only arms and heads,’ or it could be a particular genre like ‘tap.’

Note that you can use nearly any movement vocabulary to tell any story. For instance, you can demonstrate DNA repair utilizing basketball drills. And you can examine ‘mutation’ using balletic movement. And you can investigate different kinds of bonds by using pedestrian movement, or ballet, or basketball drills, or yoga, or using only arms and heads…
Liz Lerman: Ferocious Beauty, Genome Project (copy in Prof. Hingorani’s office)
Pilobolus: http://www.youtube.com/watch?v=HVkD2_yJ_o
Alwin Nikolais: http://daiv.alexanderstreet.com (Browse for Alwin Nikolais)
Eiko and Koma: http://daiv.alexanderstreet.com (Browse for Eiko and Koma)

Each student must submit a written reflection.

**Guidelines and assessment for group movement studies and written reflections:**
Movement studies will be evaluated on three criteria: 1) The incorporation and accuracy of scientific material in movement; 2) The utilization of varied movement vocabulary, compositional devices and elements of movement (space, time, energy, weight) introduced in class; and 3) Your 2 page written critical reflection, which should describe the scientific material addressed, describe the process by which you translated the material into movement, and include your assessment of the effectiveness and overall effect of the translation. Your writing should demonstrate how your creative choices are informed by your knowledge of subject matter.
MEANING MAKING IN DANCE

Movement Assignment IV (Draft due on May 4)

The first group project was intended to get you to begin thinking about ‘translation’ into movement. The second group project was intended to get you to experiment consciously with ‘form’, with basic elements of movement (space, time, energy), and the idea of movement vocabularies. In the third we intended for you to tackle a complex topic in biology through movement. In the fourth group project we would like you to consider the purpose, framing, and modes of representation that are possible in dance choreography and performance.

This fourth movement assignment can be on any topic of your choice from the science material covered in this course. You have to show a first and second (final) draft of this assignment. The first draft will be shown in class on May 4. We will give feedback and then each group will revise THIS study as your final project due on May 14, 9 am - noon. You must submit a written reflection on the same day.

Remember to consider the following issues discussed over the course of the semester:

What is your goal in creating this movement study?
What do you hope the audience and/or the performers will take from the performance?
- Do you hope to clearly communicate a scientific concept or process through movement in a way that will teach or inform the audience about science?
- Do you hope to create a model or new perspective on a scientific process or concept?
- Do you hope to create an artistic work based on the principles or concepts of a particular scientific information?
- Does the audience need to ‘get’ what you are showing?
- Are there other viable, useful or generative possibilities you can imagine for relating dance/movement and science?

In what way are you communicating to your audience? Are you:
- Teaching them something?
- Telling them a story?
- Demonstrating or modeling something?
- Conveying an emotion or a state (empathy)?
- Commenting on, or critiquing something?
- Giving them something?
- Other…

What is the dancing body?
- A person, a community?
- A shape, a medium for displaying forms?
- An assemblage of cells, or molecules, or body systems?
Compositional structuring in dance: By what logic are you arranging and putting movement in sequence? Are you:
- Telling a story?
- Creating episodes or snapshots?
- Presenting different perspectives on one topic? (theme and variation)
- Demonstrating a process?
- Other…

What is your movement vocabulary?
The movement vocabulary does not have to have a name. It just signifies the kind of movement you are using. It could be as simple as ‘using only arms and heads,’ or it could be a particular genre like ‘tap.’ Note that you can use nearly any movement vocabulary to tell any story. For instance, you can demonstrate DNA repair utilizing basketball drills. And you can examine ‘mutation’ using balletic movement. And you can investigate different kinds of bonds by using pedestrian movement, or ballet, or basketball drills, or yoga, or using only arms and heads…

Some references to choreographers who integrate perspectives on science and natural world into their work:
Liz Lerman: Ferocious Beauty, Genome Project (copy in Prof. Hingorani’s office)
Pilobolus:  http://www.youtube.com/watch?v=HVkD2_yEJ_o
Alwin Nikolais: http://daiv.alexanderstreet.com (Browse for Alwin Nikolais)
Eiko and Koma: http://daiv.alexanderstreet.com (Browse for Eiko and Koma)

Guidelines and assessment for group movement studies and written reflections:
Movement studies will be evaluated on three criteria: 1) The incorporation and accuracy of scientific material in movement; 2) The utilization of varied movement vocabulary, compositional devices and elements of movement (space, time, energy, weight) introduced in class; and 3) Your 4-5 page written critical reflection, which should describe the scientific material addressed, describe the process by which you translated the material into movement, and include your assessment of the effectiveness and overall effect of the translation. Your writing should demonstrate how your creative choices are informed by your knowledge of subject matter.