Bone Sense:  
A survey on osteoporosis and bone health

Course Syllabus

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Course Introduction  
Every year, more than 3 million cases of osteoporosis surface in the United States alone. While it is true that the largest group afflicted by weak bones and high fracture risks is the elderly, bone health depends heavily on the quality of the “bone-building years” between ages 15 and 25. As such, it is crucial that awareness be brought to this disease amongst younger age groups, such as college students.

This DeCal works alongside ABH@Berkeley, which is based on the awareness-raising endeavors of the American Bone Health (ABH) organization whose mission is “to mobilize communities with timely bone health information that supports strong and healthy bones and prevents osteoporosis and fractures.” That being said, this DeCal will educate you on how to maintain healthy bones and prevent osteoporosis while also train you on how to educate others on this topic. At the end of the 1st module, you will have the choice to enroll as an official peer educator at ABH in training or to remain as a learning student.

This course is 1 unit (pass/no pass) and is split into two lecture-based modules: Volunteer Training and The Bigger Picture. Interactive workshops and simulations will also be offered in the course. Whether or not you choose to become a peer educator, the course will offer an enriched curriculum on bones, from general health and education to the scientific mechanisms underlying osteoporosis. At the end of the semester, you will be either a peer educator or a student, well-rounded and well-versed in bone health education, maintenance, science, and presentation. You will also be able to critically think about bone health—in both macro and micro views—and offer others guidance on preventing osteoporotic disease.

Expectations & Communication  
Come to lecture prepared and ready to participate! Make sure you have all assigned readings completed prior to class as quizzes will be based on this information. The podcasts are optional, but they can be helpful when you study for the exam. All written analyses and presentations are expected to be concise, well-thought out, and accurate.

Check bCourses regularly for any announcements concerning assignment changes, lecture material uploads, etc. The e-mails of the facilitators are provided above and are checked regularly, so do not hesitate if you have any questions or anything you would like to tell us (including feedback!).
Grading
In order to receive a passing grade in this class, you must complete the following:

1. Pass 2/3 Quizzes and the Exam
   - These quizzes will be given at the beginning of each lecture.
   - Each will consist of 10 questions (both multiple choice and short answer). A passing score is 7/10.

2. Complete 2/3 1-page reflection/analysis on any of the talks given by the guest speakers or any of the assigned readings.
   - This can be completed at any time during the semester and will be submitted on bCourses.
   - Receiving a passing score on this assignment will be determined by content.

3. Complete a group final presentation
   - At the end of the semester, group final presentations will be assigned.
   - Presentation topics will range from giving example Community Talks and standard bone science lectures to educational performances and Patient Case Study simulations.
   - Receiving a passing score on this presentation will be determined principally by content; however, group peer-grades will also be considered.
   - Specific assignments/instructions will be given near the end of the semester.

Absences
A total of 2 absences are allowed. We will be taking attendance at the beginning of each lecture. The last lecture is MANDATORY as this is when group final presentations will be done. Notify us of any midterm or exam conflicts and we will accommodate you.

Plagiarism & Cheating
Plagiarism of any kind will not be tolerated and will result in a “No Pass” grade in the class. In addition, the department will be notified. In terms of attendance, having other students attend lecture is strictly prohibited and will result in the same consequences.

Other Notes
If you require any disability-related accommodations or personal/emergency information that you would like to share with us, please notify us.
### Course Outline*

*curriculum outline subject to change

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<th>Week</th>
<th>Lecture Week</th>
<th>Lecturers</th>
<th>Topics</th>
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| **Volunteer Training** | 1 | 1/31 7-8pm (same time for subsequent weeks) | Facilitators + ABH National Representative | -Introductions  
-Go over syllabus  
-ABH Representative Speaker  
-Volunteer Responsibilities  
-What to Expect  
-Benefits of Being a Volunteer  
Assignments:  
-Register to be a Volunteer  
-Podcast 1: Community Talks [https://cc.readytalk.com/play?id=c3ktfz](https://cc.readytalk.com/play?id=c3ktfz) |
| | 2 | 2/7 | Facilitators | -Bone Basics (Ch. 1/2/3)  
-The Role of Calcium and Vitamin D in Bone Health (Ch. 4/5)  
Assignments:  
-Podcast 2: The Basics about Bone [https://cc.readytalk.com/play?id=e0zfzw](https://cc.readytalk.com/play?id=e0zfzw)  
-Podcast 3: Calcium & Vitamin D [http://cc.readytalk.com/play?id=a4q5th](http://cc.readytalk.com/play?id=a4q5th)  
-*The Osteoporosis Book:* “Chapter 4: Calcium”  
-*The Osteoporosis Book:* “Chapter 5: Vitamin D and Other Vitamins and Minerals” |
| | 3 | 2/14 | Facilitators | Quiz 1: Basics, Calcium/Vit. D  
-Exercise (Ch. 6/7)  
-Exercise Workshop  
-Select Exercises from Chapter 7  
-How to perform + teach exercises safely  
Assignments:  
-*The Osteoporosis Book:* “Chapter 7: Exercises” |
| | 4 | 2/21 | Facilitators | -Diagnosis (Ch. 8/9)  
-Treatment (Ch. 11/14)  
Assignments:  
-Podcast 6: Treatment |
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<th>Instructor/Resource</th>
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| 5   | 2/28   | ABH National Representatives | [http://cc.readytalk.com/play?id=3b.6lc](http://cc.readytalk.com/play?id=3b.6lc)  
- *The Osteoporosis Book*: “Chapter 8: Clinical Evaluation to Assess Bone Health”  
- *The Osteoporosis Book*: “Chapter 11: Medical Treatments” |
| 6   | 3/7    | Facilitators | **Quiz 2: Exercise, Diagnosis, and Treatment**  
- ABH Representative:  
  - Culminating discussion of podcasts  
  - Conclusion of Podcast Training  
- Fracture Risk Assessment Training  
Assignments:  
- *The Osteoporosis Book*: “Chapter 13: Bringing it All Together”  
- *The Osteoporosis Book*: “Chapter 14: Living Well with Osteoporosis” |
| 7   | 3/14   | Facilitators | **Training Exam**  
Assignments:  
- FAQ Handout  
- Calcium Rule of 300 Handout  
- NIH Osteoporosis Fact Sheet  
**The Bigger Picture: Shedding light on Bone Basics** |
| 8   | tbd    | Guest Speaker (anecdotal, doctor, or nutritionist) | **Assignments:**  
- “Four Stories of How Osteoporosis Impacts Lives”:  
  “Maria Ivanovna”:  
- Speaker  
**Assignments:**  
- Relationship Between Bone Metabolism and the Vascular System  
- Factors Influencing Bone Metabolism and the Vascular System  
**Assignments:**  
- Pathophysiology: Biological Causes of Osteoporosis”:  
  [http://www.iofbonehealth.org/pathophysiology-biological-causes-osteoporosis](http://www.iofbonehealth.org/pathophysiology-biological-causes-osteoporosis) |
| 9   | 3/21   | Facilitator | **Assignments:**  
- Relationship Between Bone Metabolism and the Vascular System  
- Factors Influencing Bone Metabolism and the Vascular System  
**Assignments:**  
- Pathophysiology: Biological Causes of Osteoporosis”:  
  [http://www.iofbonehealth.org/pathophysiology-biological-causes-osteoporosis](http://www.iofbonehealth.org/pathophysiology-biological-causes-osteoporosis) |
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| 10 | 4/14 | Guest Speaker (anecdotal, doctor, or nutritionist)  
“Osteoporosis (Pathophysiology, Nutritional Factors, Behavioral Factors)”:
http://www.clevelandclinicmeded.com/medpubs/diseasemanagement/endocrinology/osteoporosis-disease/  
Quiz 3: Bone Metabolism  
-Guest Speaker  
Assignment:  
“Osteoporosis a silent killer”:
“Early Detection: A Way to Beat the Silent Killer?”:
http://www.obgyn.net/osteoporosis/early-detection-way-beat-silent-killer |
| 11 | 4/11 | Facilitators  
-Introduce Group Final Presentations  
-Epidemiology of Osteoporosis  
Assignments:  
“Epidemiology”:
http://www.iofbonehealth.org/epidemiology  
“Epidemiology of Osteoporosis (Abstract + Introduction)”:  
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2781190/ |
| 12 | 4/18 | Facilitators  
-Pushing the Boundaries of Bone Health:  
-Stem Cell Therapy & Osteoporosis  
-Neural Control of Bone Mass  
Assignments:  
Group Final Presentation |
| 13 | 4/25 | Students!  
Group Final Presentations  
⅓ of Writing Assignments due this week |