

syllabus

summary of links

shared doc: https://docs.google.com/document/d/1aNVEKZYDac3acFXKLxAs_SMPpM_5sAhywgU4t3gU-8/edit

- includes lecture outlines, slides, and FAQ

worksheet submissions: S16427-teachers@esp.mit.edu

topic suggestions: <https://forms.gle/vs54xjdSPzGry5Pt8>

questions, comments, feedback: <https://forms.gle/8w3NXYKqTKGTzmXE7> or S16427-teachers@esp.mit.edu

motivation/goal

welcome to food (bio)chemistry!! (the first exclamation mark is part of the course title; the second one is for the sentence.) when we took 7.05 (mit's biochemistry course), we found it really cool to consider ways in which the content applied to our everyday experiences. many of these everyday experiences involved food — perhaps unsurprisingly, since food naturally involves a lot of rich chemistry and biology.

our goal for the class is to connect [the tangible, everyday experiences/knowledge that you have with/about food] to [the abstract chemistry responsible for these phenomena you experience/know about]. in other words, we aim to inspire you to *think deeply about simple things*. for example, after lecture 1, the next time you come across butter or oil, we want you to remember/think about why butter is solid while oil is liquid (at room temperature).

class overview

we will connect various food groups to corresponding biological (macro)molecules, including but not limited to the following:

food group	biological molecule
grains	carbohydrates
proteins	proteins/amino acids
fats	lipids
fruits/vegetables	fiber, vitamins, minerals, antioxidants
(dairy will be mostly skipped)	(nucleic acids will be mostly skipped)

(as noted in the course description) for each of these molecules, we will discuss:

- their chemical structure
- their reactivity in the kitchen
- their function and metabolism in the body
- what these mean for your everyday interactions/experiences with food

for you to do

each lecture will have a worksheet accompanying it, to help reinforce concepts. obviously you're not Required to do them, and we know you're busy with your own classes (so are we!), but (also obviously) you'll

understand/retain the information better if you do, and **lectures are cumulative** (i.e. lectures will often use/build on information from previous lectures), so it's encouraged! **you can submit your work for feedback by emailing S16427-teachers@esp.mit.edu.**

given that the motivation/goal for this class is to explain more deeply the tangible, everyday experiences/knowledge that *you* have with/about food, **we are taking suggestions for topics to cover!** if there are some food-related phenomena or food facts that you want to know the (bio)chemical details of, submit them to this form: <https://forms.gle/vs54xjdSPzGry5Pt8>.

in addition, if you have any **questions, comments, or feedback** about any of the lectures, you can submit them to this form: <https://forms.gle/8w3NXYKqTKGTzmXE7>. we will respond to common questions/comments in class, and to other questions/comments this shared doc (student names will not be included, of course): https://docs.google.com/document/d/1aNVEKZYDac3acFXKLxAs_SMPpM_5sAhywgUh4t3gU-8/edit.