

## YSC1218: Molecular Perspectives

2.5MC course, which will meet once per week during the whole semester

Mondays and/or Thursdays 13:00 – 14:20 in Classroom 18 or The Science Centre

one slot is reserved for lab work, if students want to conduct experiments for their final presentation

**Prerequisites:** none

**Readings:** The Disappearing Spoon: And Other True Tales... by Sam Kean, ISBN: 978-0316051637

Chemistry: The Molecules of Life by Jordan and Kallenbach, ISBN: 978-0199946174

**Instructor:** Stanislav Presolski, Cendana 02-05E [https://youtu.be/\\_5Qp8e1CxvM](https://youtu.be/_5Qp8e1CxvM)

**Office Hours:** Open door policy, i.e. if I am in - you're welcome, if not - wait for 5 minutes, and if I don't show up, I'm probably in the lab or in a meeting, so drop by some other time or make an appointment.

**CAP-consistent grading scheme:** <- A+ >96%, A >92%, A- >88%, B+ >84%, B >80%, B- >76%...

Participation: 20% <- active engagement, insightful questions, references to the posted readings

Weekly Homework 30% <- short assignments to strengthen the knowledge/skills from the class activities

Final Presentation: 50% <- research, experiment on, and present on a molecular topic of your choosing!

### Course description and Learning goals:

This course will incorporate a story-telling approach, accessible to non-science majors, to illustrate the evolution of fundamental ideas about atoms and molecules. The impact of chemistry on history and our modern day lives will be discussed in terms of key discoveries and the scientists who made them. Topics such as thermodynamics, kinetics, stereochemistry, organic synthesis, spectroscopy, and molecular modelling will be covered in a palatable manner using examples drawn from medicine, polymers, natural products, etc. **On successful completion of the course a student should be able to:** understand the fundamental physical laws that govern our universe, appreciate how the basic properties of atoms and molecules give rise to the complex phenomena we experience in our daily lives, make observations, propose hypotheses, and suggest ways to test them.

### Health and Wellness:

While academic work is a very important aspect of your college education, your physical and mental health should always be a top priority. No assignment, lab report or exam preparation is worth you skipping a meal or going without sleep! If you find that the course is extremely challenging and you are failing to cope with the workload, talk to your instructor and your classmates for more effective study strategies, help with planning, or additional tutoring. And if you are experiencing undue stress or feel you might benefit from private counseling, please contact the Yale-NUS Health and Wellness Centre. You may also wish to reach out to Associate Dean within your residential College or the Centre for Teaching and Learning (CTL) for learning accommodations. For this and other kinds of support: <https://studentlife.yale-nus.edu.sg/wellness/>

### Lab safety:

Entrance to the Yale-NUS labs will only be granted to those who have completed the online safety training and wear appropriate clothing, which minimizes the risk of severe bodily harm if an accident happens. That includes closed-toe shoes, long pants or skirt leaving no skin exposed, and the provided lab coat. Safety goggles and protective gloves should also be worn as instructed.

**Academic integrity:**

The work that you present and submit must be your own! Details on proper citation and what constitutes "original work" will be discussed in class or provided for each assignment, with grading rubrics specifying the penalties for minor omissions/transgressions. Faculty, however, are obliged by the College to report any case of plagiarism to the Committee on Integrity and Discipline, which might take further disciplinary action. <http://library.yale-nus.edu.sg/plagiarism/> <https://studentlife.yale-nus.edu.sg/policies/academic-integrity/>

**Attendance:**

As per Yale-NUS regulations: 1. Students are expected to attend all classes. Students must request the permission of the faculty member to be absent from classes. 2. Students are generally entitled to miss one class meeting of a course for the purposes of required fieldwork for another course. Students must nevertheless still request and agree this absence with the faculty member teaching the course they will be absent from. 3. Permission to be absent from class for reason of extra-curricular activities is not automatic and is at the discretion of the faculty member. 4. Faculty members may permit a student to be absent for a reason other than fieldwork, but is entitled to apply grading penalties. Faculty members determine their own practices in this respect and these will be clearly stated on the course syllabus. 5. Faculty members may penalize students for unauthorized absence. 6. Penalties for both authorized and unauthorized absence will normally be on a sliding scale of severity.

**Late Assignment Policy:**

Assignments will be considered late if they miss the deadline without an AD note or Medical Certificate from a Doctor. Late assignments will be penalized 10% of the assignment per day late. Students should request an extension as soon as possible, if they anticipate a scheduling conflict.