

## Biophysical Chemistry (CHEM 560)

Fall 2019

8:00 - 8:50 am MWF, Chem 180

- Instructor:** Guilherme Indig  
Phone 229-5034; office: Chem 639.
- Office hours:** Wednesday, 10:00 am - 12:00 noon, or by appointment (to schedule an appointment, please call 229-5034). There will be no email office hours.
- Text:** Physical Chemistry. Principles and Applications in Biological Sciences. *by Tinoco, Sauer, Wang, Puglisi, Harbison and Rovnyak*, 5<sup>th</sup> edition, 2014, Pearson. ISBN-10: 0-13-605606-7; ISBN-13: 978-0-13-605606-5.
- Prerequisites:** Junior status, grade of C or better in Chem 104, grade C or better in Math 211 or equivalent.
- Grading:** There will be three in-class exams scheduled for October 2, October 30, and November 22. Only the two highest in-class exam grades will be used in the calculation of the final course grade (in-class exams will account for 60% of the final grade; i.e. 30% for each of the highest grades). **There will be no makeup exams given.** The final exam (cumulative) is scheduled for Wednesday, December 18, from 7:30 am to 9:30 am and will account for 40% of the final grade.

### Tentative Schedule:

Sep. 4	Introduction		
6	Ch. 2 – The First Law	Nov. 1	Ch. 7 – Electrochemistry
9	Ch. 2 – The First Law	4	Ch. 7 – Electrochemistry
11	Ch. 2 – The First Law	6	Ch. 7 – Electrochemistry
13	Ch. 2 – The First Law	8	Ch. 7 – Electrochemistry
16	Ch. 2 – The First Law	11	Ch. 7 – Electrochemistry
18	Ch. 3 - The Second Law	13	Ch. 9 – Kinetics
20	Ch. 3 - The Second Law	15	Ch. 9 – Kinetics
23	Ch. 3 – The Second Law	18	Ch. 9 – Kinetics
25	Ch. 3 – The Second Law	20	Ch. 9 – Kinetics
27	Ch. 3 – The Second Law	<b>22</b>	<b>Exam 3</b>
30	Ch. 3 – The Second Law	25	Ch. 9 – Kinetics
<b>Oct. 2</b>	<b>Exam 1</b>	Dec. 2	Ch. 9 – Kinetics
4	Ch. 4 – Chemical Equilibria	4	Ch. 10 – Enzyme Kinetics
7	Ch. 4 – Chemical Equilibria	6	Ch. 10 – Enzyme Kinetics
9	Ch. 4 – Chemical Equilibria	9	Ch. 10 – Enzyme Kinetics
11	Ch. 4 – Chemical Equilibria	11	Review
14	Ch. 4 – Chemical Equilibria	<b>18</b>	<b>Final Exam, 7:30 am - 9:30 am</b>
16	Ch. 4 – Chemical Equilibria		<b>(cumulative)</b>
18	Ch. 6 – Physical Equilibria		
21	Ch. 6 – Physical Equilibria		
23	Ch. 6 – Physical Equilibria		
25	Ch. 6 – Physical Equilibria		
28	Ch. 6 – Physical Equilibria		
<b>30</b>	<b>Exam 2</b>		

## Syllabus Links

1. *Students with disabilities.* Notice to these students should appear prominently in the syllabus so that special accommodations are provided in a timely manner. <http://uwm.edu/arc/>
2. *Religious observances.* Accommodations for absences due to religious observance should be noted. [https://www4.uwm.edu/secu/docs/other/S\\_1.5\\_ACCOMMODA\\_OUS\\_BELIEFS.pdf](https://www4.uwm.edu/secu/docs/other/S_1.5_ACCOMMODA_OUS_BELIEFS.pdf)
3. *Students called to active military duty.* Accommodations for absences due to call-up of reserves to active military duty should be noted.  
Students: <http://uwm.edu/active-duty-military/>  
Employees: <https://www.wisconsin.edu/ohrwd/download/policies/ops/bn9.pdf>
4. *Incompletes.* A notation of "incomplete" may be given in lieu of a final grade to a student who has carried a subject successfully until the end of a semester but who, because of illness or other unusual and substantiated cause beyond the student's control, has been unable to take or complete the final examination or to complete some limited amount of term work. [https://www4.uwm.edu/secu/docs/other/S\\_31\\_INCOMPLETE\\_GRADES.pdf](https://www4.uwm.edu/secu/docs/other/S_31_INCOMPLETE_GRADES.pdf)
5. *Discriminatory conduct.* Discriminatory conduct will not be tolerated by the University. It poisons the work and learning environment of the University and threatens the careers, educational experience, and well-being of students, faculty, and staff. [https://www4.uwm.edu/secu/docs/other/S\\_47\\_Discrimina\\_duct\\_Policy.pdf](https://www4.uwm.edu/secu/docs/other/S_47_Discrimina_duct_Policy.pdf)
6. *Title IX/Sexual Violence.* Title IX is a federal law that prohibits sex discrimination in education program or activities, and UWM policy prohibits such conduct (see Discriminatory Conduct, above). This includes sexual violence, which may include sexual harassment, sexual assault, relationship violence, and/or stalking in all educational programs and education-related areas. UWM strongly encourages its students to report any instance of sex discrimination to UWM's Title IX Coordinator (titleix@uwm.edu). Whether or not a student wishes to report an incident of sexual violence, the Title IX Coordinator can connect students to resources at UWM and/or in the community including, but not limited to, victim advocacy, medical and counseling services, and/or law enforcement. For more information, please visit: <https://uwm.edu/sexual-assault/>.
7. *Academic misconduct.* Cheating on exams or plagiarism are violations of the academic honor code and carry severe sanctions, including failing a course or even suspension or dismissal from the University. <http://uwm.edu/academicaffairs/facultystaff/policies/academic-misconduct/>
8. *Complaint procedures.* Students may direct complaints to the head of the academic unit or department in which the complaint occurs. If the complaint allegedly violates a specific university policy, it may be directed to the head of the department or academic unit in which the complaint occurred or to the appropriate university office responsible for enforcing the policy. [https://www4.uwm.edu/secu/docs/other/S\\_47\\_Discrimina\\_duct\\_Policy.pdf](https://www4.uwm.edu/secu/docs/other/S_47_Discrimina_duct_Policy.pdf)
9. *Grade appeal procedures.* A student may appeal a grade on the grounds that it is based on a capricious or arbitrary decision of the course instructor. Such an appeal shall follow the established procedures adopted by the department, college, or school in which the course resides or in the case of graduate students, the Graduate School. These procedures are available in writing from the respective department chairperson or the Academic Dean of the College/School. [https://www4.uwm.edu/secu/docs/other/S\\_28\\_Grade\\_Appe\\_by\\_Students.pdf](https://www4.uwm.edu/secu/docs/other/S_28_Grade_Appe_by_Students.pdf)
10. *LGBT+ resources.* Faculty and staff can find resources to support inclusivity of students who identify as LGBT+ in the learning environment. <http://uwm.edu/lgbtrc/>
11. *Smoke and Tobacco-Free campus.* UWM prohibits smoking and the use of tobacco on all campus property. [https://www4.uwm.edu/secu/docs/other/S\\_49\\_Smoke\\_Toba\\_Free\\_Policy.pdf](https://www4.uwm.edu/secu/docs/other/S_49_Smoke_Toba_Free_Policy.pdf)
12. *Final Examinations.* Information about the final exam requirement, the final exam date requirement, and make-up examinations. [https://www4.uwm.edu/secu/docs/other/S\\_22\\_Final\\_Examinations.pdf](https://www4.uwm.edu/secu/docs/other/S_22_Final_Examinations.pdf)