All hand-outs are posted on the faculty website at www.nwic.edu/faculty (follow the Assessment link)

Before completing this form, please refer to the *Instructions for Completing the Course Outcomes Form.* Please submit this form electronically to amkarlberg@nwic.edu.

Last date this form was updated or edited	March 24, 2006
Course Number (e.g., ENGL 101)	CHEM 113
Course Name (e.g., English Composition I)	Biological Chemistry
List all instructor(s) who participated in creating and approved these course outcomes (please consult with at least one other person)	Rochelle Troyano, Adib Jamshedi
List the main textbooks, readings or other resources used in this course (including title, year and publisher)	General, Organic, and Biological Chemistry, 4 th Edition, by H. Stephen Stoker, 2007

A.	NWIC outcomes:	From the List of NWIC	C Outcomes, selec	t the <i>most</i> impo	rtant outcomes y	ou <u>assess</u>
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NWIC outcome # (e.g., "Written communication: 2a. write standard English") Oral communication skills	Instructional Activities: How will students master this outcome? (e.g., solving problems, group activity) Students will make regular oral	Assessment/Evaluation Strategies: How will you measure this outcome? (e.g., student presentations, essays) Presentations will show students
3a. apply effective presentation skills	presentations in class	ability to research, understand and orally present assigned topics in biochemistry
Quantitative skills 5b. use analytical and critical thinking skills to draw and interpret conclusions	Students will be required to understand biochemical pathways	Students will be able to relate biochemical pathways to solve or identify problems that exist in the real-world

B. Course outcomes: In order of priority, list the <u>most</u> important other learning outcomes for this course that you <u>assess</u> (a maximum of 8).

Other course outcomes: Complete the sentence – As a result of this course, students will be able to		Instructional Activities: How will students master this outcome? (e.g., solving problems, group activity)	Assessment / Evaluation Strategies: How will you measure this outcome? (e.g., student presentations, essays)	
1.	Classify carbohydrates, memorize structures of monosaccharides, and describe how monosaccharides react.	 Presentation of lecture based on text Use of Internet-based learning activities Visual viewing and written description of carbohydrates 	 Exams/quizzes employing mainly short answer questions Weekly reflection papers to enhance recall 	
2.	Describe structural polysaccharides.	 Presentation of lecture based on text Use of Internet-based learning activities 	 Exams/quizzes employing short answer questions Weekly reflection papers to enhance recall 	

3.	Describe lipid formation.	 Presentation of lecture based on text Use of Internet-based learning activities 	 Exams/quizzes employing short answer questions Weekly reflection papers to enhance recall
4.	Describe formation and characteristics of proteins.	 Presentation of lecture based on text Use of Internet-based learning activities 	 Exams/quizzes employing short answer questions Weekly reflection papers to enhance recall
5.	Perform various lab techniques	1. Lab presentations	1. Lab work and written reports

C. Please list the NWIC outcomes and course outcomes from above on your syllabus.