North Iowa Area Community College
Course Outline

Please follow the included instructions when completing this form. Direct questions to Division Chair. After Course Outline is completed, please submit to Division Chair for review, who then submits to Administrative Assistant to the Vice President for Academic Affairs for review by the Curriculum and Academic Affairs Council (CAAC).

Prepared by:	Nikae Perkinson
Date Approved by CAAC:	February 4, 2019
Course Title:	Introduction to General Chemistry
Course Number:	CHM-122
Equivalent Prior Course Numbers:	70-140, CHEM-101
Academic Division/Department:	Natural Science

Credits – Semester Hours (s.h.): 4

Contact Hours As defined by the Iowa Department of Education in consultation with Division Chair/Registrar (see attached instructions).

Lecture:	45	1 s.h. = 15 contact hours
Lab:	30	1 s.h. = 30 contact hours
Clinical Practice:	0	1 s.h. = 45 contact hours
Work Experience:	0	1 s.h. = 60, 75, 90, or 105 contact hours
Total:	**75**	

Prerequisite(s):

MAT-063 or equivalent

Corequisite(s):

None

Course Description:

This course is intended for non-science majors or for science majors who need a background in chemistry before taking General Chemistry I. Topics covered include measurement, dimensional analysis, periodicity, atomic structure, chemical bonding, inorganic nomenclature, solution chemistry, stoichiometry and gases. Laboratory activities are an important aspect of this course.

Required Textbook(s) and Other Required Materials:

Open Stax under Creative Commons Attribution License, March 2015, **Print:** ISBN-10: 1938168399 ISBN-13: 978-1-938168-39-0. **Digital:** ISBN-10: 1-947172-09-3, ISBN-13: 978-1-947172-09-8. iBooks: ISBN-10: 1-938168-12-7 ISBN-13: 978-1-938168-12-3
Safety glasses or goggles
Scientific Calculator, TI30x IIS

Purpose of Course Check one [X] in consultation with Division Chair.

X	Arts and Sciences (General Education)
X	Arts and Sciences
	Career and Technical (General Education)

☐ Career and Technical
☐ Developmental

If course is offered only in specific semesters, please explain below:

Maximum number of weeks for which the course is offered:

16

[Do not edit the following section. Managed by Academic Affairs]

Is this a Core Competency Anchor Course? YES ☐ NO ☐

If "Yes," list Core Competency Student Learning Outcome Numbers being taught and assessed in this course (2.2, 3.1, etc.)

(Example) 2.2 [Press Tab to create new rows for each SLO]

Student Learning Outcomes (SLOs):

The student who successfully completes this course will be able to:

1. Apply chemical theories (such as the kinetic molecular theory), laws (such as the law of conservation of mass), definitions (such as the definition of density), and conventions, (such as IUPAC - International Union of Pure and Applied Chemistry - nomenclature rules), to solve problems.
2. Demonstrate safe and prudent laboratory techniques.
3. Apply mathematical concepts in the context of chemistry, such as scientific notation to express large and small numbers or linear algebra to solve for unknown values.
4. Identify and explain the characteristic features of matter including chemical reactivity, physical properties, composition and structure.