

## Upstate Medical University General Assessment Education Plan for Undergraduate Courses

### Knowledge and Skill Areas addressed:

1. Mathematics (Quantitative Reasoning) (Prerequisites, BIOL 310 Biostatistics)
  - a. Students will demonstrate the ability to:
    - i. Interpret and draw inferences from mathematical models such as formulas, graphs, tables, and schematics;
    - ii. Represent mathematical information symbolically, visually, numerically, and verbally;
    - iii. Employ quantitative methods such as arithmetic, algebra, geometry, geometry, or statistics to solve problems;
    - iv. Estimate and check mathematical results for reasonableness; and
    - v. Recognize the limits of mathematical and statistical methods.
2. Natural Sciences (Scientific Reasoning) (BIOL 441 Research Methods, BIOL 451 Research Methods, NURS 481 Research in Nursing)
  - a. Students will demonstrate:
    - i. Understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis; and
    - ii. Application of scientific data, concepts, and models in one of the natural (or physical) sciences.
3. Basic Communication (Written and Oral Communication)(ENGL 302/303 Professional Communication, ENGL 325 Professional and Technical Writing)
  - a. Students will:
    - i. produce coherent texts within common college-level written forms;
    - ii. demonstrate the ability to revise and improve such texts;
    - iii. Research a topic, develop an argument, and organize supporting details;
    - iv. Develop proficiency in oral discourse; and
    - v. Evaluate an oral presentation according to established criteria.
4. Critical Thinking (Critical Analysis and Reasoning) (BIOL 441 Research Methods, BIOL 451 Research Methods, NURS 481 Research in Nursing, ENGL 302/303 Professional Communication, ENGL 325 Professional and Technical Writing)
  - a. Students will:
    - i. Identify, analyze, and evaluate arguments as they occur in their own or others' work; and
    - ii. Develop well-reasoned arguments.
5. Information Management (Information Literacy and Technological Competency)(BIOL 441 Research Methods, BIOL 451 Research Methods, NURS 481 Research in Nursing)
  - a. Students will:
    - i. Perform the basic operations of personal computer use;

- ii. Understand and use basic research techniques; and
  - iii. Locate, evaluate and synthesize information from a variety of sources.
- 6. Values, Ethics, and Diverse Perspectives (CBHX 315/316 Healthcare Ethics, NURS 420 Ethics, Nursing and the Health Professions)
  - a. Students will:
    - i. Integrate culturally competent health care principles and practices into ethical decision making and application.
    - ii. Appreciate and respect differing values and perspectives, including those of patients, other health professionals, family members and those close to patients, and the public

Programs requiring General Education Assessment:

- College of Health Professions
  - BS Cardiovascular Perfusion (CVP)
  - BS Medical Biotechnology (MEDB)
  - BS, BPS Medical Imaging (MIS ) – Tracks: Rad, CT, MRI, US)
  - BS Medical Technology (MEDT)
  - BS, BPS Radiation Therapy (RADT)
  - BS Respiratory Therapy (RESP)
- College of Nursing
  - BS Nursing (NURS)

SUNY Outcome/Competency	Mathematics	Natural Sciences	Basic Communication	Critical Reasoning	Information Management	
Middle States Outcome/Competency	Quantitative Reasoning	Scientific Reasoning	Written and Oral Communication	Critical Analysis and Reasoning	Information Literacy/Technological Competency	Values, Ethics, and Diverse Perspectives
Prerequisites	CVP, MEDB, MIS, MEDT, RADT, RESP					
BIOL 310 Biostatistics (3 Cr)	NURS					
BIOL 441 Research Methods (3 Cr)		CVP		CVP	CVP	
BIOL 451 Research Methods (1 Cr)		MEDB, MIS, MEDT, RADT, RESP		MEDB, MIS, MEDT, RADT, RESP	MEDB, MIS, MEDT, RADT, RESP	
ENGL 302/303 Professional Communication (0.5 Cr Each)			CVP, MIS (BS-CT, MRI), RADT(BS), RESP			
ENGL 325 Professional and Technical Writing (3 Cr)			MEDB, MIS(BS – Rad, BPS), MEDT, RADT(BPS), NURS			
NURS 481 Research in Nursing (3 Cr)		NURS		NURS	NURS	
CBHX 315 Health Care Ethics (2 Cr)						CVP, MEDB, MIS, MEDT, RADT, RESP
NURS 420 Ethics, Nursing and the Health Professions (3 Cr)						NURS

Measures of Student Outcomes:

1. BIOL 310 Biostatistics

- a. Graded homework assignment
  - b. Final project/paper
- 2. BIOL 441 Research Methods
  - a. Literature search
  - b. Research article critique
  - c. Final exam grades
- 3. BIOL 451 Research Methods
  - a. Literature search
  - b. Research article critique
  - c. Final exam grades
- 4. CBHX Health Care Ethics
  - a. Ethics paper
- 5. ENGL 302/303 Professional Communication
  - a. Writing and revising cover letter and resume (MIS, CVP, RADT)
  - b. Writing and revising paper/proposal and PowerPoint presentation (RADT, RESP)
  - c. Mock job interview (RADT)
- 6. ENGL 325 Professional and Technical Writing
  - a. Writing and revising proposal and PowerPoint presentation (MEDB, MEDT, MIS, NURS, RADT)
- 7. NURS 420 Ethics, Nursing and the Health Professions
  - a. Scholarly paper
- 8. NURS 481 Research in Nursing
  - a. Writing and revising a research paper

### Assessment Procedure

- 1. Gen Ed categories will be assessed on the following cycle:
  - a. Year 1 – Natural Sciences, Critical Reasoning, Information Management
  - b. Year 2 – Communication, Mathematics, Ethics
  - c. New courses will be assessed upon initial offering.
- 2. Faculty teaching Gen Ed courses will be asked to submit:
  - a. A course syllabus
  - b. An Outcomes Assessment Report (template provided) that includes the following:
    - i. Learning Outcome Statements
    - ii. Methods/Measures to assess each outcome
    - iii. Assessment results (percentage of students who fall into these categories: exceed, fulfill, approach, or fail to meet each learning outcome)
    - iv. Action plan(if applicable, changes the instructor will make in the course for continuous improvement)
- 3. The Upstate Gen Ed Committee will:
  - a. Review the findings and recommendations from the last report to understand past issues, to evaluate progress made since the last reporting period, and to help guide the committee in making recommendations in its current report.
  - b. Evaluate the Outcomes Assessment Report and assess the extent to which the courses are addressing the student learning outcomes for the Gen Ed category(ies) to which

they have been assigned, as well as overall strengths and weaknesses in student learning with regard to such learning outcomes.

- c. Make recommendations that address strengths and weaknesses identified in (b).
4. The Upstate Gen Ed Committee evaluates success, considers students' needs and faculty suggestions, weighs changes over time and explores areas for improvement. Issues involving individual faculty or students experiences are treated as confidential within the process of evaluating course portfolios. Individual faculty or students will not be identified in the report. Course portfolios are maintained in an archive for limited access and data analysis.
5. The Upstate Gen Ed Committee generates a report which contains the following:
  - a. A brief summary regarding how the recommendations and issues discussed in the prior report have been addressed
  - b. A discussion of strength and weaknesses about the extent to which courses in each Gen Ed category are addressing the learning outcomes in each category
  - c. A discussion of strengths and weaknesses with regard to student learning as they relate to each student learning outcome in the Gen Ed category of concern
  - d. Recommendations to make as a result of its review of the Outcomes Assessment Reports
6. The Upstate Gen Ed process is facilitated and overseen by the Vice President for Academic Compliance and University Accreditation and the Office of Evaluation and Assessment.



## General Education Learning Outcomes Assessment Report

Category – Natural Sciences (Scientific Reasoning)

Course – BIOL 451 Research Methods

Instructor – Professor Smith

Outcome Statements	Assessment Methods/Measures	Assessment Results	Action Plans	Committee Review
<p>Students will demonstrate understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement, and data collections.</p> <p>Students will demonstrate application of scientific data, concepts, and models on one of the natural sciences.</p>	Literature search	Exceed = 30% Fulfill = 25% Approach = 20% Fail to meet = 25%	Although a majority of the students fulfill or meet the expectations, a substantial number of students fail to meet the expectations. An analysis of the term papers reveals that these students fail to demonstrate basic ability to use three-part structure. Change the directions for Comprehensive Essay III, making it very clear that students must write an essay with a three-part structure, a beginning, middle and end.	
	Research article critique			
	Final exam			

SUNY Upstate General Education Assessment Process:

