

Appendix A: The Limited List of General Education Courses

General Education Program Limited List Fall 1998 - Fall 2004 Additions/Deletions

FINE ARTS

Two courses, that equal a minimum of 6 credit hours, from 2 of the following departments: Art, Music, Speech & Performing Arts (Performance only). No more than 1 course from a program (including transferred courses) may be used to meet the General Education Program Fine Arts distribution requirement.

ART 101	Art in Society
ART 106	Introduction to Art History
ART 170A	Studio Experiences: Photography
ART 170B	Studio Experiences: Painting
ART 170C	Studio Experiences: Sculpture
ART 170D	Studio Experiences: Metals & Jewelry
ART 170E	Studio Experiences: Printmaking Studio
ART 170F	Experiences: Ceramics
ART 170G	Studio Experiences: Drawing
CMT MDIA 160	The Art of Film and Video
CMT THEA 130	Introduction to Theatre
MUS 101	The Musical Experience
MUS 104	Music Concepts: An Introduction
MUS DANC 101	The Dance Experience: Intro to the Art of Dance
SPCH MASS 160	The Art of Film and Video (CMT MDIA as of Fall 2004)
SPCH PERF 130	Introduction to Theatre (CMT THEA as of Fall 2004)

SOCIAL/BEHAVIORAL SCIENCES

Four courses, that equal a minimum of 12 credit hours, from at least 2 of the following departments: Anthropology, Economics, Geography & Environmental Studies, History, Political Science, Psychology, and Sociology. No more than 2 courses from any one program, including transferred courses, may be used to meet the General Education Program Social/Behavioral Sciences distribution requirement.

ANTH 212	Cultural Anthropology
ANTH 215	Human Origins
CS 100	Computers and Society (added Fall 2004)
ECON 215	Principles of Macroeconomics
ECON 217	Principles of Microeconomics
G&ES 104	World Geography
G&ES 150	Introduction to Environmental Studies (added Fall 2004)
HIST 111A	World History: West to 1500
HIST 111B	World History: West, 1500-Present
HIST 111C	World History: East Asia
HIST 111D	World History: Latin America
HIST 111E	World History: Africa
HIST 214	United States History, 1607-1877
HIST 215	United States History, 1877-Present
PSCI 210	Introduction to Political Science
PSCI 216	American National Government
PSYC 100	Survey of Psychology
PSYC 110	Life Span Development
SOC 100	Introduction to Sociology

SOC 105 Women, Men, and Social Change

NATURAL SCIENCES

Four courses, that equal a minimum of 12 credit hours, from at least 2 of the following departments: Biology, Chemistry, Earth Science, Physics. No more than 2 courses from any one program, including transferred courses, may be used to meet the General Education program Natural.

Sciences distribution requirement and **one course MUST have a lab component.**

BIOL 100	Introduction to Biology (Lab)
BIOL 104	The Changing Natural Environment
CHEM 103	Chemistry and Society
CHEM 110	Chemical Concepts (Lab)
ESCI 121	Intro to Earth Science (Lab)
ESCI 123	Geology, Resources, & Environment
PHYS 103	The Universe: Past, Present, Future
PHYS 110	Physics in Everyday Life (Lab)

added Fall 2000

added Fall 2003

added Fall 2004

Dept. change to CMT Fall 2004

ENGL 204 Deleted Fall 2000

HUMANITIES

Three courses, that equal a minimum of 9 credit hours, from at least 2 of the following departments: English, Foreign Languages, Linguistics, Philosophy, Speech Communications, Women's Studies. No more than 2 courses from any one program, including transferred courses, may be used to meet the General Education Program Humanities distribution requirement.

CMT COMM 100	Introduction to Communication
ENGL201	The World of Poetry
ENGL202	The World of Drama
ENGL203	The World of Fiction
(ENGL 204)	The World of Poetry and Drama - Deleted Fall 2000)
FL ARAB101	Arabic I - added Fall 2003
FL ARAB102	Arabic II - added Fall 2003
FL CHIN101	Chinese I
FL CHIN102	Chinese II
FL CHIN103	Chinese III
FL CHIN104	Chinese IV
FL FREN101	French I
FL FREN102	French II
FL FREN103	French III
FL GER101	German I
FL GER102	German II
FL GER103	German III
FL GREK101	Greek I
FL GREK102	Greek II
FL GREK103	Greek III
FL ITAL 101	Italian I
FL ITAL102	Italian II
FL ITAL103	Italian III
FL JPN 101	Japanese I
FL JPN 102	Japanese II
FL JPN 103	Japanese III
FL JPN 104	Japanese IV
FL KOR 101	Korean I
FL KOR 102	Korean II
FL KOR 103	Korean III
FL POL 101	Polish I
FL POL 102	Polish II
FL POL 103	Polish III
FL PORT 101	Portuguese I
FL PORT 102	Portuguese II
FL PORT 103	Portuguese III
FL RUSS 101	Russian I
FL RUSS 102	Russian II
FL RUSS 103	Russian III
FL SPAN 101	Spanish I
FL SPAN 102	Spanish II
FL SPAN 103	Spanish III
FL SWAH 101	Swahili I (added Fall 2004)
FL SWAH 102	Swahili II (added Fall 2004)
LING 110	Lexicology: The Study of Words
LING 120	Language and Human Behavior
PHIL 101	Critical Thinking
PHIL 102	Introduction to Philosophy (added Fall 2004)
PHIL 213	Ethics
(SPCH COMM 100)	Introduction to Communication - CMT COMM as of Fall 2004)

WSP 101 Women's Perspectives and Values

LIMITED LIST OF GENERAL EDUCATION HONORS COURSES

ANTH 215&	Human Origins
ART 106&	Introduction to Art History
BIOL 100&	Introduction to Biology (Lab)
CHEM 110&	Chemical Concepts (Lab)
ECON 215&	Principles of Macroeconomics
ESCI 121&	Intro to Earth Science (Lab)
ENGL201&	The World of Poetry (Fall 2000 to Hnrs List)
ENGL202&	The World of Drama (Fall 2003 to Hnrs List)
ENGL203&	The World of Fiction
G&ES 104&	World Geography
HIST 111B&	World History: West, 1500-Present
LING 120&	Language and Human Behavior
MUS 104&	Music Concepts: An Introduction
PHIL 213&	Ethics
PHYS 110&	Physics in Everyday Life (Lab)
PSCI 216&	American National Government
PSYC 100&	Survey of Psychology (Spring 1999 to Hnrs List)
SOC 100&	Introduction to Sociology
SPCH PERF 130&	Introduction to Theatre
WSP 101&	Women's Perspectives and Values

Appendix B: Writing Rubric

Writing Rubric

(adapted from: Barbara Walvoord, Winthrop Univ., Virginia Community College System, Univ. of Washington)

Quality Criteria	No/Limited Proficiency	Some Proficiency	Proficiency	High Proficiency	(Rating)
1. Thesis/Focus: (a) Originality	Thesis is missing	Thesis may be obvious or unimaginative	Thesis is somewhat original	Develops fresh insight that challenges the reader's thinking;	
2. Thesis/Focus: (b) Clarity	Reader cannot determine thesis & purpose OR thesis has no relation to the writing task	Thesis and purpose are somewhat vague OR only loosely related to the writing task	Thesis and purpose are fairly clear and match the writing task	Thesis and purpose are clear to the reader; closely match the writing task	
3. Organization	Unclear organization OR organizational plan is inappropriate to thesis. No transitions	Some signs of logical organization. May have abrupt or illogical shifts & ineffective flow of ideas	Organization supports thesis and purpose. Transitions are mostly appropriate. Sequence of ideas could be improved	Fully & imaginatively supports thesis & purpose. Sequence of ideas is effective. Transitions are effective	
4. Support/ Reasoning (a) Ideas (b) Details	Offers simplistic, undeveloped, or cryptic support for the ideas. Inappropriate or off-topic generalizations, faulty assumptions, errors of fact	Offers somewhat obvious support that may be too broad. Details are too general, not interpreted, irrelevant to thesis, or inappropriately repetitive	Offers solid but less original reasoning. Assumptions are not always recognized or made explicit. Contains some appropriate details or examples	Substantial, logical, & concrete development of ideas. Assumptions are made explicit. Details are germane, original, and convincingly interpreted	
5. Use of sources/ Documentation	Neglects important sources. Overuse of quotations or paraphrase to substitute writer's own ideas. (Possibly uses source material without acknowledgement.)	Uses relevant sources but lacks in variety of sources and/or the skillful combination of sources. Quotations & paraphrases may be too long and/or inconsistently referenced	Uses sources to support, extend, and inform, but not substitute writer's own development of idea. Doesn't overuse quotes, but may not always conform to required style manual	Uses sources to support, extend, and inform, but not substitute writer's own development of idea. Combines material from a variety of sources, incl. pers. observation, scientific data, authoritative testimony. Doesn't overuse quotes.	

6. Audience awareness	Little or no awareness of audience or form's requirements. Egocentric. A written form of speech for one's self.	Stance is that of a novice attempting to please an expert.	Stance is somewhat tentative and meets reader's needs with some skill, but is not as consistently successful.	Stance is that of an expert who consistently and skillfully anticipates reader's needs. Rhetorically sophisticated.	
7. Style (a) Sentences (b) Diction/Syntax (c) Tone/Voice	Superficial and stereotypical language. Oral rather than written language patterns predominate	Sentences show little variety, simplistic. Diction is somewhat immature; relies on clichés. Tone may have some inconsistencies in tense and person	Sentences show some variety & complexity. Uneven control. Diction is accurate, generally appropriate, less advanced. Tone is usually appropriate	Sentences are varied, complex, & employed for effect. Diction is precise, appropriate, using advanced vocabulary. Tone is mature, consistent, suitable for topic and audience	
8. Writing Conventions: Grammar/Spelling/Usage/Punctuation	Mechanical & usage errors so severe that writer's ideas are hidden	Repeated weaknesses in mechanics and usage. Pattern of flaws	Mechanical and usage errors that do not interfere with meaning	Essentially error free. Evidence of superior control of diction	
9. Presentation	Essay looks untidy and does not follow does not follow basic formatting rules (e.g., margins, headers & subheaders)	Essay looks fairly neat but violates some formatting rules	Essay looks neat but violates one or two formatting rules	Essay looks neat, crisp, and professional	

(Total Points)	
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Appendix C: Critical Thinking Rubric, Long Form

General Education Critical Thinking Rubric, Long Form
Northeastern Illinois University

Quality					
Macro Criteria	No/Limited Proficiency	Some Proficiency	Proficiency	High Proficiency	Rating
1. Identifies & Explains Issues	Fails to identify, summarize, or explain the main problem or question. Represents the issues inaccurately or inappropriately.	Identifies main issues but does not summarize or explain them clearly or sufficiently	Successfully identifies and summarizes the main issues, but does not explain why/how they are problems or create questions	Clearly identifies and summarizes main issues and successfully explains why/how they are problems or questions; and identifies embedded or implicit issues, addressing their relationships to each other.	
2. Distinguishes Types of Claims	Fails to label correctly any of the factual, conceptual and value dimensions of the problems and proposed solutions.	Successfully identifies some, but not all of the factual, conceptual, and value aspects of the questions and answers.	Successfully separates and labels all the factual, conceptual, and value claims	Clearly and accurately labels not only all the factual, conceptual, and value, but also those implicit in the assumptions and the implications of positions and arguments.	
3. Recognizes Stakeholders and Contexts	Fails accurately to identify and explain any empirical or theoretical contexts for the issues. Presents problems as having no connections to other conditions or contexts.	Shows some general understanding of the influences of empirical and theoretical contexts on stakeholders, but does not identify many specific ones relevant to situation at hand.	Correctly identifies all the empirical and most of theoretical contexts relevant to all the main stakeholders in the situation.	Not only correctly identifies all the empirical and theoretical contexts relevant to all the main stakeholders, but also finds minor stakeholders and contexts and shows the tension or conflicts of interests among them.	
4. Considers Methodology	Fails to explain how/why/which specific methods of research are relevant to the kind of issue at hand.	Identifies some but not all methods required for dealing with the issue; does not explain why they are relevant or effective.	Successfully explains how/why/which methods are most relevant to the problem.	In addition to explaining how/why/which methods are typically used, also describes embedded methods and possible alternative methods of working on the problem.	
5. Frames Personal Responses and Acknowledges Other Perspectives	Fails to formulate and clearly express own point of view, (or) fails to anticipate objections to his/her point of view, (or) fails to consider other perspectives and position.	Formulates a vague and indecisive point of view, or anticipates minor but not major objections to his/her point of view, or considers weak but not strong alternative positions.	Formulates a clear and precise personal point of view concerning the issue, and seriously discusses its weaknesses as well as its strengths.	Not only formulates a clear and precise personal point of view, but also acknowledges objections and rival positions and provides convincing replies to these.	

Quality Micro Criteria	No/Limited Proficiency	Some Proficiency	Proficiency	High Proficiency	Rating
6. Reconstructs Arguments	Fails to identify the major components of the main arguments at stake and to show their logical relations.	Identifies a few of the premises but confuses the conclusion of the main argument in support of the position under consideration (his or her own, or that of others)	Correctly analyzes the arguments and theories; restates its component propositions and reconstructs their relationships correctly.	Not only correctly reconstructs the main argument but does the same for subsidiary arguments and theories, and correctly identifies the kind or status of each of them.	
7. Interprets Content	Fails to identify and choose between the possible meanings of the key terms and propositions included in the arguments and theories in use.	Clarifies the meaning of a few but far from all of the key terms and propositions involved.	Convincingly explains the meaning of all the key terms and main propositions involved in the arguments and theories involved.	Offers fined-grained and original interpretations of a crucial term or proposition involved in the issue.	
8. Evaluates Assumptions	Fails to identify and evaluate any of the important assumptions behind the claims and recommendations made.	Identifies some of the most important assumptions, but does not evaluate them for plausibility or clarity.	Identifies and evaluates all the important assumptions, but not the ones deeper in the background – the more abstract ones.	Not only identifies and evaluates all the important assumptions, but also some of the more hidden, more abstract ones.	
9. Evaluates Evidence	Fails to identify data and information that counts as evidence for truth-claims and fails to evaluate its credibility.	Successfully identifies data and information that counts as evidence but fails to thoroughly evaluate its credibility.	Identified all important evidence and rigorously evaluates it.	Not only identifies and rigorously evaluates all important evidence offered, but also provides new data or information for consideration.	
10. Evaluates Inferences	Fails to identify and explain mistakes in the reasoning of others and fails to avoid them in his or her own reasoning.	Successfully identifies and avoids some common mistakes of reasoning but misses less common ones, and does not explain why or how they are mistakes.	Identifies and avoids all mistakes of reasoning and explains some of them.	Not only identifies and avoids all mistakes of reasoning but gives clear explanations of why they are mistakes.	

Appendix D: Critical Thinking Rubric, Short Form

General Education Critical Thinking Rubric (*Short Version*)
Northeastern Illinois University

Quality Criteria	No/Limited Proficiency	Some Proficiency	Proficiency	High Proficiency	Rating
1. Identifies & Explains Issues	Fails to identify, summarize, or explain the main problem or question. Represents the issues inaccurately or inappropriately.	Identifies main issues but does not summarize or explain them clearly or sufficiently	Successfully identifies and summarizes the main issues, but does not explain why/how they are problems or create questions	Clearly identifies and summarizes main issues and successfully explains why/how they are problems or questions; and identifies embedded or implicit issues, addressing their relationships to each other.	
2. Recognizes Stakeholders and Contexts (i.e., cultural/social, educational, technological, political, scientific, economic, ethical, personal experience)	Fails accurately to identify and explain any empirical or theoretical contexts for the issues. Presents problems as having no connections to other conditions or contexts.	Shows some general understanding of the influences of empirical and theoretical contexts on stakeholders, but does not identify any specific ones relevant to situation at hand.	Correctly identifies all the empirical and most of the theoretical contexts relevant to all the main stakeholders in the situation.	Not only correctly identifies all the empirical and theoretical contexts relevant to all the main stakeholders, but also finds minor stakeholders and contexts and shows the tension or conflicts of interests among them.	
3. Frames Personal Responses and Acknowledges Other Perspectives	Fails to formulate and clearly express own point of view, (or) fails to anticipate objections to his/her point of view, (or) fails to consider other perspectives and position.	Formulates a vague and indecisive point of view, or anticipates minor but not major objections to his/her point of view, or considers weak but not strong alternative positions.	Formulates a clear and precise personal point of view concerning the issue, and seriously discusses its weaknesses as well as its strengths.	Not only formulates a clear and precise personal point of view, but also acknowledges objections and rival positions and provides convincing replies to these.	
4. Evaluates Assumptions	Fails to identify and evaluate any of the important assumptions behind the claims and recommendations made.	Identifies some of the most important assumptions, but does not evaluate them for plausibility or clarity.	Identifies and evaluates all the important assumptions, but not the ones deeper in the background – the more abstract ones.	Not only identifies and evaluates all the important assumptions, but also some of the more hidden, more abstract ones.	
5. Evaluates Evidence	Fails to identify data and information that counts as evidence for truth-claims and fails to evaluate its credibility.	Successfully identifies data and information that counts as evidence but fails to thoroughly evaluate its credibility.	Identifies all important evidence and rigorously evaluates it.	Not only identifies and rigorously evaluates all important evidence offered, but also provides new data or information for	

Quality Criteria	No/Limited Proficiency	Some Proficiency	Proficiency	High Proficiency	Rating
				consideration.	
6. Evaluates Implications , Conclusions, and Consequences	Fails to identify implications, conclusions, and consequences of the issue, or the key relationships between the other elements of the problem, such as context, assumptions, or data and evidence.	Suggests some implications, conclusions, and consequences, but without clear reference to context, assumptions, data, and evidence.	Identifies and briefly discusses implications, conclusions, and consequences considering most but not all the relevant assumptions, contexts, data, and evidence.	Identifies and thoroughly discusses implications, conclusions, and consequences, considering all relevant assumptions, contexts, data, and evidence.	

Appendix E: ICTS Basic Skills Test Information

ILLINOIS CERTIFICATION TESTING SYSTEM

FIELD 96: BASIC SKILLS

TEST FRAMEWORK

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Illinois Certification Testing System

FIELD 96: BASIC SKILLS

TEST FRAMEWORK

Subarea	Range of Objectives
I. Reading Comprehension	06
II. Language Arts	07–13
III. Mathematics	14–18

**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

ILLINOIS CERTIFICATION TESTING SYSTEM

FIELD 96: BASIC SKILLS

TEST FRAMEWORK

Reading Comprehension
Language Arts
Mathematics

SUBAREA I—READING COMPREHENSION

The skills addressed in this subarea require demonstration of literal, inferential, and critical reading skills in a variety of written materials—including college-level texts and original source documents—in the areas of physical and life sciences, humanities and fine arts, and the social and behavioral sciences.

0001 Determine the meaning of words and phrases in context.

The following are examples of content that may be covered under this standard.

- Use context clues to determine the meaning of unfamiliar words or words with multiple meanings.
- Recognize the correct use of commonly misused pairs (e.g., affect/effect) in a passage.
- Determine the meaning of figurative or colloquial language in a passage.
- Identify appropriate synonyms or antonyms for words in a passage.

0002 Understand the main idea and supporting details in written material.

The following are examples of content that may be covered under this standard.

- Identify the stated main idea of a paragraph or passage.
- Establish the sequence of events or steps presented in a passage.
- Recognize information that supports, illustrates, or elaborates the main idea of a paragraph or a passage.
- Identify the meaning of a figurative expression in a passage.

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**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

0003 Apply skills of inference and interpretation to a variety of written materials.

The following are examples of content that may be covered under this standard.

- Recognize a writer's implied purpose for writing (e.g., to persuade, to describe).
- Identify the statement that best expresses the implied main idea of a paragraph or passage.
- Recognize implied cause-and-effect relationships in a passage.
- Interpret the content, word choice, and phrasing of a passage to determine a writer's opinions, point of view, or position on an issue.

0004 Analyze relationships among ideas in written material.

The following are examples of content that may be covered under this standard.

- Recognize similarities and differences among ideas in a passage.
- Analyze relationships between ideas in opposition (e.g., pro and con).
- Select solutions to problems based on information presented in written material.
- Draw conclusions from information stated or implied in a passage.

0005 Use critical reasoning skills to evaluate written material.

The following are examples of content that may be covered under this standard.

- Recognize stated or implied assumptions on which the validity of an argument depends.
- Determine the relevance of specific facts, examples, or graphic data to a writer's argument.
- Recognize fallacies in the logic of a writer's argument.
- Recognize qualifying language and distinguish between fact and opinion in written material.
- Assess the credibility, objectivity, or bias of the author of a passage or the author's sources.

**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

0006 Apply skills for outlining and summarizing written materials and interpreting information presented in graphs or tables.

The following are examples of content that may be covered under this standard.

- Organize the main ideas in a passage into an outline or another form of graphic or tabular organization.
- Identify an accurate summary of a passage.
- Interpret information presented in charts, graphs, or tables.

SUBAREA II—LANGUAGE ARTS

The skills addressed in this subarea require demonstration of the ability to write effectively at the college level, with control over the conventions of edited English in the United States and competence in drafting, organizing, and revising written work, as well as the ability to exercise critical thinking and reflection in written communications.

A. GRAMMAR AND USAGE

0007 Demonstrate command of standard usage in edited English in the United States.

The following are examples of content that may be covered under this standard.

- Understand the standard use of verbs (e.g., subject-verb agreement, verb tense, consistency of tense).
- Identify and apply the standard use of pronouns (e.g., pronoun-antecedent agreement, standard pronoun case, use of possessive pronouns, standard use of relative and demonstrative pronouns).
- Recognize and apply the standard use of modifiers (e.g., adverbs, adjectives, prepositional phrases).

0008 Understand and apply knowledge of mechanical conventions in edited English in the United States.

The following are examples of content that may be covered under this standard.

- Recognize instances in which incorrect or extraneous punctuation has been used or necessary punctuation has been omitted.
- Identify standard initial capitalization and standard capitalization with proper words and titles.
- Recognize the standard spelling of words.

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**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

B. WRITING

0009 Understand the role of purpose and audience in written communication.

The following are examples of content that may be covered under this standard.

- Assess the appropriateness of written material for a specific purpose or audience (e.g., a business letter, a communication to parents).
- Determine the likely effect on an audience of a writer's choice of a particular word or words (e.g., to evoke sympathy, to raise questions about an opposing point of view).
- Identify persuasive techniques used by a writer in a passage.
- Demonstrate the ability to adapt forms, organizational strategies, and styles for different audiences and purposes.

0010 Understand unity, focus, development, and organization in writing.

The following are examples of content that may be covered under this standard.

- Identify organizational methods used by the author of a passage.
- Distinguish between effective and ineffective thesis statements.
- Recognize unnecessary shifts in point of view (e.g., shifts from first to third person) or distracting details that impair development of the main idea in a passage.
- Select appropriate and effective supporting material.
- Recognize examples of focused, concise, and well-developed writing.

0011 Understand and apply editing and revision strategies.

The following are examples of content that may be covered under this standard.

- Apply editing and revision strategies affecting diction, syntax, transitions, organization, clarity, coherence, and point of view.
- Make revisions that improve the unity and focus of a passage or that improve cohesion and the effective sequence of ideas.
- Improve the clarity and effectiveness of a passage through changes in word choice.
- Eliminate or replace unnecessary or imprecise words and phrases.
- Insert appropriate transitional words or phrases (e.g., however, as a result) in a passage to convey the structure of the text and to help readers understand the sequence of a writer's ideas.

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**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

0012 Recognize sentences and paragraphs that effectively communicate intended messages.

The following are examples of content that may be covered under this standard.

- Demonstrate an understanding of unity within paragraphs and apply methods for enhancing paragraph organization and unity.
- Recognize effective topic sentences and distinguish between effective and ineffective development of ideas within a paragraph.
- Identify sentence fragments and run-on sentences.
- Recognize wordiness, redundancy, and ineffective repetition in sentences and paragraphs.
- Recognize inefficiency in sentence and paragraph construction.

C. WRITING ASSIGNMENT

0013 Prepare an organized, developed composition in edited English as used in the United States in response to instructions regarding content, purpose, and audience.

The following are examples of content that may be covered under this standard.

- Compose a unified, focused, and sustained piece of writing on a given topic using language and style appropriate to a specified audience, purpose, and occasion.
- Take a position on a contemporary social or political issue and defend that position with reasoned arguments and supporting examples.
- Use effective sentence structure and apply the standards of edited English in the United States.
- Demonstrate the ability to spell, capitalize, and punctuate according to the standards of edited English in the United States.

**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

SUBAREA III—MATHEMATICS

The skills addressed in this subarea require demonstration of quantitative literacy at the college level through the application of mathematical methods and reasoning to the solution of real-world problems.

0014 Solve problems involving integers, fractions, decimals, and units of measurement.

The following are examples of content that may be covered under this standard.

- Solve problems involving integers, fractions, and decimals, including percentages.
- Solve problems involving ratios and proportions.
- Solve problems involving units of measurement, including U.S. customary and metric measurements, and conversions, including scientific notation (e.g., 6.05×10^8).
- Use estimation skills to solve problems.

0015 Apply mathematical reasoning skills to analyze patterns and solve problems.

The following are examples of content that may be covered under this standard.

- Draw conclusions using inductive reasoning.
- Draw conclusions using deductive reasoning.
- Identify errors in mathematical explanations.

0016 Solve problems involving algebra and geometry.

The following are examples of content that may be covered under this standard.

- Graph numbers or number relationships.
- Find the value of the unknown in a given one-variable equation.
- Express one variable in terms of a second variable in two-variable equations.
- Solve problems involving lines and angles.
- Solve problems involving two- and three-dimensional geometric figures (e.g., perimeter and area problems, volume and surface area problems).

**FIELD 96: BASIC SKILLS
TEST FRAMEWORK**

0017 Understand concepts and procedures related to data analysis and statistics.

The following are examples of content that may be covered under this standard.

- Interpret information from tables, line graphs, bar graphs, histograms, pictographs, and pie charts.
- Recognize appropriate representations of various data in graphic form (discrete and continuous).
- Demonstrate an understanding of fundamental statistical concepts (e.g., mean, correlation, standard deviation).
- Interpret graphic and nongraphic representations of frequency distributions, percentiles, central tendency, variability, and correlation.

0018 Solve applied problems using a combination of mathematical skills (including word problems involving one and two variables).

The following are examples of content that may be covered under this standard.

- Apply combinations of mathematical skills to solve a series of related problems.
- Identify an equation to solve word problems involving one and two variables.
- Apply number concepts and geometric principles to solve practical problems.
- Apply statistical principles to analyze patterns and trends in data.

Appendix F: Academic Profile Information for Faculty

The Academic Profile

A test of undergraduate reading, writing, critical thinking, and math skills

Faculty Information Booklet

Jointly sponsored by The College Board and Educational Testing Service

THE ACADEMIC PROFILE

The Academic Profile is a test of general academic knowledge and skills. *It is intended for use by colleges and universities in assessing the outcomes of their general education programs to improve the quality of instruction and learning.* The test focuses on the academic skills developed through general education courses rather than on the knowledge acquired about the subjects taught in these courses. It does this by testing college-level reading, writing, critical thinking, and mathematics in the context of humanities, social sciences, and natural sciences.

The Academic Profile assumes that students have completed most or all of the general education, or core curriculum, requirements at their institution. The questions have a broad range of difficulty; some are quite easy, others are more difficult. It is an objective test using a multiple-choice format.

Two Forms of the Test

The Academic Profile is available in two forms:

The standard form consists of 108 questions and has a testing time of 120 minutes.

The abbreviated form consists of 36 questions to be answered in 40 minutes of testing time.

Scores

The Academic Profile yields:

Eight norm-referenced scores on college-level skills:

- | | |
|--------------------|---------------------|
| ■ Humanities | ■ Writing |
| ■ Social Sciences | ■ Critical Thinking |
| ■ Natural Sciences | ■ Mathematics |
| ■ Reading | ■ Total Score |

Norm-referenced scores derive their meaning only from comparisons with other scores—scores of other students, scores from the same students at different time periods, or scores from other colleges and universities. Tests such as the SAT and GRE are norm-referenced tests.

The Academic Profile also yields:

Criterion-referenced proficiency levels for three skill areas:

- Writing
- Mathematics
- Reading/Critical Thinking

Three levels are reported for each area.

Criterion-referenced scores have meaning in and of themselves. Such scores are defined in terms of an established level of performance or proficiency, and a student is either proficient, marginal, or not proficient in each criterion or proficiency level. A full definition of the skills expected for each of the levels is provided on pages 21 through 23.

Score Reports

Scores and demographic information are summarized and reported both graphically and numerically. Depending on the form used, the following scores are reported.

Standard form users receive:

For the total group tested:

- eight norm-referenced scores
- three proficiency-level scores

For individual students:

- eight norm-referenced scores
- three proficiency-level scores

Abbreviated form users receive:

For the total group tested:

- eight norm-referenced scores
- three proficiency-level scores

For individual students:

- norm-referenced total score

Scores on the Academic Profile will be summarized and reported for the total group of students tested. In addition, an alphabetical roster with individual student scores is provided. For the *standard form only*, individual student score sheets with the eight norm-referenced scores, three proficiency-level scores, and interpretive information are sent to the institution with the summary score report.

Locally Written Questions

Space is provided on the answer sheet for students to answer up to 50 locally written questions. This allows an institution to tailor the Academic Profile to unique aspects of its particular program, adding specific local significance to the test.

Responses to any locally written questions will be tabulated and reported on the Academic Profile score report.

Essay

An optional 45-minute essay is available as part of the Academic Profile but is timed separately from the objective test. If the essay is used, it can be retained by the institution to be read and scored locally using a scoring guide provided with the essays, or ETS will score for a charge per test. Sample essay questions are provided on pages 19 and 20.

Availability

The Academic Profile is available only to colleges and universities for use with enrolled students. It is not available for personal purchase. The tests must be administered under conditions designed to protect their security. All copies of used tests must be returned immediately following the test administration. Unused tests may be kept secure for future testing.

The tests are administered by each institution at its convenience; scores are reported approximately three weeks after receipt of completed answer sheets at ETS. All scores are sent directly to the institution, which is responsible for reporting the test scores to its students.

Confidentiality

All Academic Profile data are considered confidential and are reported only to the institution involved. Data aggregated across institutions are available as comparative data; individually identifiable information is available only to the institution involved. Data are kept on file at ETS for five years and then destroyed.

The Content and Scope of the Academic Profile

Materials included in the Academic Profile—reading selections, graphs, tables, and artistic designs—are concerned with issues, themes, and ideas from the humanities, social sciences, and natural sciences. The questions related to these materials—for example, the questions that follow a reading selection—measure a student’s ability to read carefully; to make judgments about the clarity, correctness, or organization of the materials as pieces of writing; and to think critically about the issues and arguments presented. Mathematical data are presented both within the context of the three academic areas and in a mathematical form independent of academic content.

The questions do not explicitly ask for recall of specific information learned in humanities, social sciences, or natural science courses; they do assume, however, that a student who has taken general education courses in these areas will be better able to read the materials and answer the accompanying questions than a student who has not taken such courses.

- Pages 7 through 9 describe in more detail the subject matter covered and the kinds of skills measured in the Academic Profile.
- On pages 10 through 18 you will find sample questions from the Academic Profile.
- Pages 19 and 20 contain samples of the essay topics.
- Pages 21 through 23 contain definitions of Proficiency Levels.

Humanities

The humanities materials include selections (poetry, fiction, and nonfiction prose) from classical literature in translation and from American and British literature. The materials also include discussions of key terms in the humanities. Visual elements are also presented as well as discussions of painting, music, philosophical issues, and materials by and about women and people of color.

Some of the skills measured in *reading questions* include the ability to:

- understand and interpret figurative language
- recognize the salient features or themes in a work of art
- discern main idea, purpose, or focus of a passage
- recognize explicitly presented information
- draw appropriate inferences

Some of the skills measured in *writing questions* include the ability to:

- recognize agreement among basic grammatical elements
- organize units of language for coherence and rhetorical effect

Some of the skills measured in *critical thinking questions* include the ability to:

- evaluate hypothesis
- recognize flaws and inconsistencies in an argument
- draw reasonable conclusions
- recognize elements of a humanities selection that strengthen or weaken the argument presented in that selection

Some of the skills measured in *mathematics questions* include the ability to:

- interpret a trend represented in graphic form
- solve problems involving insight or logical reasoning
- solve problems involving sets (The problems would have numeric answer choices.)

Social Sciences

The social sciences materials present topics and issues that might be discussed in a general education course of history, economics, political science, psychology, anthropology, sociology, or indeed in any general education social science course. The materials are often interdisciplinary in their approach to a topic; that is, they draw on more than one of the social science fields in their presentation of a topic. Social science topics of particular relevance to women and people of color are represented in the materials, which include both reading selections and graphs and/or tables.

Some of the skills measured in *reading questions* include the ability to:

- recognize the primary purpose for which a piece of social science writing was composed
- recognize statements that are explicitly made in a piece of social science writing
- recognize rhetorical devices used in social science writing
- interpret the meaning of key terms used in a piece of social science writing

Some of the skills measured in *writing questions* include the ability to:

- recognize the most grammatically correct revision of a clause, sentence, or sentences from a piece of social science writing
- order units of language into coherent larger units
- recognize and reword figurative language used in a social science passage

Some of the skills measured in *critical thinking questions* include the ability to:

- recognize assumptions made in a piece of social science writing
- recognize the best hypothesis to account for information presented in a social science passage
- recognize information that strengthens or weakens arguments made in such a passage

Some of the skills measured in *mathematics questions* include the ability to:

- read and interpret tables and graphs
- evaluate formulas
- order and compare large numbers

Natural Sciences

The natural sciences materials are often interdisciplinary in nature; that is, they present topics and issues that might be discussed in a general education course in biology, chemistry, or physics. In addition, the materials may present experimental findings in ways that are familiar to a student who has taken any kind of general education science course. Where materials are not interdisciplinary, topics and issues in biology will receive more emphasis than those in chemistry and physics. The materials include both reading selections and graphs and/or charts.

Some of the skills measured in *reading questions* include the ability to:

- recognize the primary purpose of a given science passage
- recognize those statements that are explicitly presented in such a passage
- recognize valid inferences that can be made based on information presented in a passage

Some of the skills measured in *writing questions* include the ability to:

- recognize the most grammatically correct revision of a sentence or sentence drawn from an example of scientific writing
- organize elements of scientific writing into larger units of meaning

Some of the skills measured in *critical thinking questions* include the ability to:

- recognize the best hypothesis to explain a scientific phenomenon presented in a passage
- interpret the relationship between variables presented in a passage
- draw valid conclusions based on information presented in a passage
- recognize statements that strengthen or weaken an argument presented in a passage

Some of the skills measured in *mathematics questions* include the ability to:

- interpret scientific material presented in graphs and tables
- interpret ratios, proportions, or percents presented in scientific materials
- order and compare very large and very small numbers
- recognize equivalent mathematical formulas or expressions
- read a scientific measuring instrument

SAMPLE MULTIPLE-CHOICE QUESTIONS

Humanities

Questions 1-2

[Socrates' friends urged him to go into exile to escape a death sentence handed down in court as punishment for his philosophic questioning. Socrates answered that the Laws of the state would claim he had no justification for evading the death sentence. Here is part of his answer.]

Socrates: What then, suppose the Laws reply,
"Was that the agreement between us, Socrates? If you
please, what do you complain of in us and the state
that you try to destroy us? First of all, did we not
bring you into life, and through us your father took
your mother, and begat you? Tell us then, are the
marriage laws those of us you find fault with? Or, the
laws about feeding the child and the education in
which you were brought up? Did not those which had
the duty do well in directing your father to educate
you in mind and body? And when you had been born
and brought up and educated, could you say in the
first place that you were not our offspring and our
slave, you and your ancestors also? And if this is so,
do you think you have equal rights with us, and
whatever we try to do to you, do you think you also
have a right to do to us?"

Line
(5)

(10)

(15)

Reading

1. According to Socrates, the position put forward by the Laws is that

- (A) it is not possible for a court sentence to be in error
- (B) Socrates has a duty to honor his mother and father
- (C) the citizen owes obedience to the laws of the state in return for the nurture the state has provided
- (D) education is so precious a gift that even life can be exacted in exchange for it

Critical Thinking

2. Suppose that a feminist suffragist such as Alice Paul, who was jailed for picketing the White House to gain the vote for women, argued that the state had no right to punish her, despite the claim of validity made by the Laws. Which of the following arguments could she have best used to oppose the claim made by the Laws?

- (A) The denial of the vote leaves her as a noncitizen outside the state and not in a position to make the agreement the Laws describe.
 - (B) Even if the peace was disturbed by the picketing, confinement in jail was too severe for the nature of the offense.
 - (C) The freedom to oppose the policies of the government should be extended to all.
 - (D) Sincerity of opposition to one of the edicts of the government can motivate disobedience to it.
-

Directions: You are going to be asked to rewrite the following sentences in your head. You will be told exactly how to begin your new sentence. Keep in mind that your new sentence should have the same meaning as the sentence given you. In choosing answers, follow the requirements of standard written English; that is, pay attention to acceptable usage in grammar, diction (choice of words), sentence construction, and punctuation. Choose the best answer and fill in the corresponding lettered space on the answer sheet; this answer should be clear and exact, without awkwardness, ambiguity, or redundancy.

3. Being a female jockey, she was often interviewed.

Rewrite, beginning with

She was often interviewed...

The next words will be

- (A) on account of she was
- (B) by her being
- (C) because she was
- (D) by being a

Social Sciences

Questions 4-6

Economic growth and territorial expansion in medieval and early modern times depended on urbanization, trade, colonization, conquest, and the clearing of land. But the increase in human contact established by these endeavors carried enormous risks of infection by disease. By adopting the concept of the unification of the globe by disease, we can discern the relationships between, and therefore better understand, phenomena seemingly very diverse. For example, we can see a connection between the outbreaks of plague in Western Europe, which recurred from the fourteenth through the sixteenth centuries, and beginning in the sixteenth century, the drastic depopulation of the New World by the spread of disease among its population.

This "community of disease" came about as the large populations of the world — the Chinese, the European, the Native American — expanded, and travel and trade among them greatly increased. The trade routes (traveled by

armies of rats and fleas as well as humans) stretched across many disease-ridden areas. The danger became acute the moment traders from Genoa crossed the Black Sea and arrived in Central Asia, newly unified by the Mongols; and then once again, when Christopher Columbus, also Genoese, set sail westwards. Ultimately a large part of the world's population perished from disease.

(25) So great is the role of demography as something that shapes the development of human civilization that these devastating losses of life and the painfully slow recoveries from them influenced much of world history.

4. In using the phrase "community of disease" in line 14 above, the author of the passage most likely intends to indicate that

- (A) members of a particular society generally develop resistance to diseases that occur frequently in their society
- (B) only members of the same society are likely to be susceptible to certain diseases
- (C) the exposure of diverse peoples of the world to the same diseases constitutes a link between these peoples
- (D) the devastating effect of disease is a unifying factor among the people who suffer from it

5. The author's discussion in the passage above presupposes that, before expanded trade routes linked Europe, China, and the Americas, which of the following was the case?

- (A) The large populations of the world did not suffer from disease.
- (B) Infectious diseases were found only in Western Europe.
- (C) Infectious diseases were unlikely to spread between the large populations of the world.
- (D) The traders from Genoa contributed to the spread of infectious diseases more than did any other group.

6. Which of the following is the best revision of "So great is the role of demography as something that shapes the development of human civilization that" in lines 25-26 above?

- (A) So great is the role of demography in shaping the development of human civilization that
- (B) Of such greatness is the role of demography to shape the development of human civilization,
- (C) The role of demography is of such greatness in shaping the development of human civilization,
- (D) The role of demography is great enough to shape the development of human civilization such that

Natural Sciences

Questions 7-10

The influence of the color of the coat of an animal on its ability for absorbing solar radiation is a subject of debate between biologists. Surface coloration arises from differential reflection or transmission of light waves by fur or feathers. Light that is not reflected or transmitted is absorbed, resulting in heat generation. Biologists have generally accepted the view that animals with dark-colored fur or feathers, and hence greater absorptivity for light waves, gain more heat from solar radiation than do animals with light-colored coats. Recent findings suggest, however, that properties of the coat other than color are important in determining how effectively an animal can use the Sun's energy.

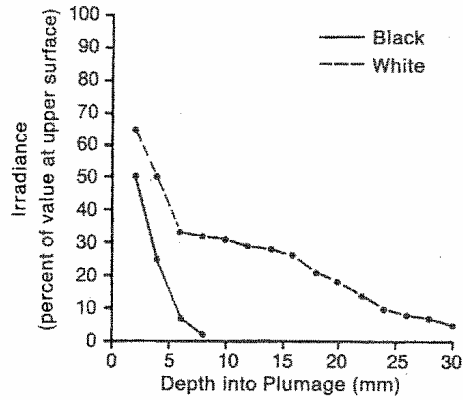
The amount of light that penetrates the coat of an animal and reaches the skin is an important determinant in the relation between solar heat gain and coat color. Light penetration is affected by the structure of an animal's coat and by the optical properties of fur or feathers. It has been found that different animals with similar coloring have coats that vary greatly in the density and arrangement of hairs or feathers. The amount of light that passes through the coats

of these animals also varies greatly. Furthermore, some light-colored animals, such as the polar bear, have hollow, transparent hairs that allow light to pass through to the skin.

- (25) Such animals might be able to use the Sun's energy more effectively than animals with dense coats of solid hairs.
7. The passage indicates that the coloration of an animal's coat
- (A) is totally independent of the animal's habitat
 - (B) is determined by the optical properties of the animal's fur or feathers
 - (C) changes in response to cold weather
 - (D) has evolved in response to the need to retain heat energy from sunlight
8. If the previously accepted view described in lines 6-10 were correct, then
- (A) arctic species would have to sacrifice camouflage to capture the maximum heat from sunlight falling on them
 - (B) dark-colored birds would retain body-generated heat in high wind-speed conditions better than light-colored birds would
 - (C) species living in hot desert habitats would tend to be dark-colored, rather than colored to match their environments
 - (D) the relative body size of two dark-colored species would not affect their relative loss of body heat in cold, sunny conditions

Penetration of Light into Black and White Pigeon Plumages

Penetration of Light into Black and White Pigeon Plumages



9. According to the graph above, the percent of surface radiation that penetrates 5 millimeters into the plumage of a white pigeon is about
- (A) one-third the percent that penetrates 5 mm into the plumage of a black pigeon
 - (B) one-sixth the percent that penetrates 5 mm into the plumage of a black pigeon
 - (C) three times the percent that penetrates 5 mm into the plumage of a black pigeon
 - (D) six times the percent that penetrates 5 mm into the plumage of a black pigeon

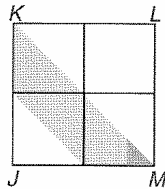
Directions: In each of the following sentences some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find four ways of writing the underlined part. The first of these repeats the original, but the other three are all different. If you think the original sentence is better than any of the suggested changes, you should choose answer A; otherwise you should mark one of the other choices. Select the best answer and fill in the corresponding lettered space on the answer sheet.

In choosing answers, follow the requirements of standard written English; that is, pay attention to acceptable usage in grammar, diction (choice of words), sentence construction, and punctuation. Choose the answer that expresses most effectively what is presented in the original sentence; this answer should be clear and exact, without awkwardness, ambiguity, or redundancy.

10. While waving goodbye to our friends, the airplane took off, and we watched it disappear in the sky.
- (A) While waving
(B) Waving
(C) While we are waving
(D) As we were waving

Mathematics questions not in context

Institutions can allow use of calculators



11. In the figure above, square $JKLM$ is divided into four smaller squares. If the area of $JKLM$ is 24, what is the area of the shaded region?
- (A) 8
(B) 9
(C) 10
(D) 12

12. If 40 percent of x is 18, then 20 percent of $2x$ is:

- (A) 45
- (B) 36
- (C) 18
- (D) 9

Answer Key for Sample Questions

- | | |
|------|-------|
| 1. C | 7. B |
| 2. A | 8. A |
| 3. C | 9. C |
| 4. C | 10. D |
| 5. C | 11. B |
| 6. A | 12. C |

Skills Primarily Measured in Sample Questions

Reading: questions 1, 4, 7

Writing: questions 3, 6, 10

Critical Thinking: questions 2, 5, 8

Mathematics: questions 9, 11, 12

THE ACADEMIC PROFILE ESSAY EXAMINATION

The essay portion of the Academic Profile is designed to measure the ability to write an extended response to a specified topic in either the humanities, the social sciences, or the natural sciences. Students review three topics, one in each of these academic areas, and are given 10 minutes to read the topics and choose one on which to write. They will then have 45 minutes to plan and write an essay on only ONE of the three topics; an essay on a topic not specified will not be acceptable.

The Academic Profile essay examination is designed to test more than simply the student's writing skills. Unlike many standardized essays, this essay examination requires familiarity with terms, examples, and issues from general education college-level courses in addition to requiring writing skill. This measure of the combination of skills and content adds an important dimension to essay assessments. Some examples of typical essay topics are given below.

1. *Humanities Essay Topic*

Rules and models destroy genius and art.

William Hazlitt, from
"Thoughts on Taste," 1819.

Explain what Hazlitt is saying in the statement above and discuss how this statement applies or fails to apply to any artists or writers you have studied. Provide relevant examples from your course work in the arts or the humanities to support your argument. Examples of the arts and the humanities include literature, painting, music, dance, film, and philosophy.

2. *Social Science Essay Topic*

In the early 1970's, the feminist scholar Alice S. Rossi suggested that social scientists should adopt the approach taken by the noted anthropologist Margaret Mead, who, according to Rossi, attempted to understand her subject matter primarily "through empathic projection and the absorption of the views of others—individual, class, or culture."

Explain whether you agree with Rossi's argument that social scientists should work primarily through "empathic projection" or whether you think

they should take a more detached and objective approach to their subject matter. Provide relevant examples from your course work in the social sciences to support your argument. Examples of the social sciences include political science, psychology, sociology, history, anthropology, and economics.

3. *Natural Science Essay Topic*

Scientific research can reduce superstition by encouraging people to think and view things in terms of cause and effect.

Albert Einstein, "On
Scientific Truth," 1929.

Explain what Einstein meant in the statement above and how this statement applies or fails to apply to any of the natural sciences you have studied. Provide relevant examples from your course work in the natural sciences to support your argument. Examples of the natural sciences include astronomy, biology, chemistry, geology, and physics.

ACADEMIC PROFILE PROFICIENCY LEVEL CRITERIA

Proficiency Levels for Reading and Critical Thinking

Level 1 At level 1, a student is able to perform the following tasks:

- 1) Recognize factual material explicitly presented in a reading passage
- 2) Understand the meaning of particular words or phrases in the context of a reading passage

Level 2 At level 2, a student is able to perform the following reading tasks:

- 1) Synthesize material from different sections of a passage
- 2) Recognize valid inferences derived from material in the passage
- 3) Identify accurate summaries of a passage or of significant sections of the passage
- 4) Understand and interpret figurative language
- 5) Discern the main idea, purpose, or focus of a passage or of a significant portion of the passage

Level 3 At level 3, a student is able to perform the following critical thinking tasks:

- 1) Evaluate competing causal explanations
- 2) Evaluate hypothesis for consistency with known facts
- 3) Determine the relevance of information for evaluating an argument or conclusion
- 4) Determine whether an artistic interpretation is supported by evidence contained in a work
- 5) Recognize the salient features or themes in a work of art
- 6) Evaluate the appropriateness of procedures for investigating a question of causation
- 7) Evaluate data for consistency with known facts, hypotheses, or methods
- 8) Recognize flaws and inconsistencies in an argument

Proficiency Levels for Writing Skills

Level 1 At level 1, a student demonstrates the following writing skills:

- 1) Recognizing agreement among basic grammatical elements (e.g., nouns, verbs, pronouns and conjunctions)
- 2) Recognizing appropriate transition words
- 3) Recognizing incorrect word choice
- 4) Ordering sentences in a paragraph
- 5) Ordering elements in an outline

Level 2 At level 2, a student demonstrates the following writing skills:

- 1) Incorporating new material into a passage
- 2) Recognizing agreement among basic grammatical elements (e.g., nouns, verbs, pronouns, and conjunctions) when these elements are complicated by intervening words or phrases
- 3) Combining simple clauses into single, more complex combinations
- 4) Recasting existing sentences into new syntactic combinations

Level 3 At level 3, a student demonstrates the following writing skills:

- 1) Recognizing appropriate use of parallelism
- 2) Recognizing appropriate use of idiomatic language
- 3) Recognizing redundancy
- 4) Recognizing proper constructions
- 5) Recognizing most appropriate revision

Proficiency Levels for Mathematical Skills

Level 1 At level 1, a student is able to perform the following mathematical tasks:

- 1) Solve word problems that would most likely be solved by arithmetic and do not involve conversion of units or proportionality (These problems can be multistep if the steps are repeated rather than embedded.)
- 2) Solve problems involving the informal properties of numbers and operations, often involving the number line, including positive and negative numbers, whole numbers, and fractions (including conversions of common fractions to percent, such as converting $\frac{1}{4}$ to 25%)

- 3) Solve problems requiring a general understanding of square roots and the squares of numbers
- 4) Solve a simple equation or substitute numbers into an algebraic expression
- 5) Find information from a graph (This task may involve finding a specified piece of information in a graph that also contains other information.)

Level 2 At level 2, a student is able to perform the following mathematical tasks:

- 1) Solve arithmetic problems with some complications, such as complex wording, maximizing or minimizing, and embedded ratios (These problems include algebra problems that can be solved by arithmetic, and the answer choices are numeric.)
- 2) Simplify algebraic expressions, perform basic translation, and draw conclusions from algebraic equations and inequalities (These tasks are more complicated than solving a simple equation, though they may be approached arithmetically by substituting numbers.)
- 3) Interpret a trend represented in a graph or choose a graph that reflects a trend
- 4) Solve problems involving sets (The problems would have numeric answer choices.)

Level 3 At level 3, a student is able to perform the following mathematical tasks:

- 1) Solve word problems that would be unlikely to be solved by arithmetic (The answer choices are either algebraic expressions or are numbers that do not lend themselves to back-solving.)
- 2) Solve problems involving difficult arithmetic concepts such as exponents and roots other than squares and square roots and percent of increase or decrease
- 3) Generalize about numbers; e.g., identify the values of x for which an expression increases as x increases
- 4) Solve problems requiring an understanding of the properties of integers, rational numbers, etc.
- 5) Interpret a graph in which the trends are to be expressed algebraically or in which one of the following is involved: exponents and roots other than squares and square roots and percent of increase or decrease
- 6) Solve problems requiring insight or logical reasoning

Appendix G: Selected Items from CIRP, NSSE and SBG

Gen Ed Goal 1: Ability to Communicate in Writing and Orally

CIRP-

10. Have you had, or do you feel you will need, any special tutoring or remedial work in any of the following subjects?
(Mark all that apply)

- A. English
- B. Reading
- C. Mathematics
- D. Social Studies
- E. Science
- F. Foreign Language
- G. Writing

30. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

- M. Public speaking ability
- U. Writing ability

38. Please indicate the importance to you personally of each of the following:

- K. Writing original works (poems, novels, short stories, etc.)

NSSE-

1. In your experience at your institution during the current school year, about how often have you done each of the following? Mark answers in the boxes.

- A. Asked questions in class or contributed to class discussions
- B. Made a class presentation
- C. Prepared two or more drafts of a paper or assignment before turning it in

3. During the current school year, about how much reading and writing have you done?

- C. Number of written papers or reports of 20 pages or more
- D. Number of written papers or reports between 5 and 19 pages
- E. Number of written papers or reports of fewer than 5 pages

8. To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

- C. Writing clearly and effectively
- D. Speaking clearly and effectively

Alumni Survey-

IV-C. Please rate your satisfaction with the extent to which you feel developed in the following traits and skills.

1. Written communication skills
2. Oral communication skills

Gen Ed Goal 2: Gather, Analyze, Document and Integrate Information

CIRP-

25. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark F. If you engaged in an activity one or more times but not frequently, mark O. Mark N if you have not performed the activity during the past year.

X. Used the internet for research or homework.

NSSE-

1. In your experience at your institution during the current school year, about how often have you done each of the following? Mark answers in the boxes.

D. Worked on a paper or project that required integrating ideas or information from various sources.

I. Put together ideas or concepts from different courses when completing assignments or during class discussions

2. During the school year, to what extent has your coursework emphasized the following mental activities?

B. Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components.

C. Synthesizing and organizing idea, information, or experiences into new, more complex interpretations and relationships

D. Applying theories or concepts to practical problems or in new Situations

6. Which of the following have you done or do you plan to do before you graduate from your institution?

G. Independent study or self-designed major

H. Culminating senior experience (comprehensive exam, capstone course, thesis, project, etc.)

8. To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

E. Thinking critically and analytically

M. Solving complex real-world problems

Alumni Survey-

A. Please respond to each question by evaluating your degree program as a whole.

3. Professors encouraged me to challenge my own ideas, the idea of other students, and those presented in readings and other course materials.
- C. Please rate your satisfaction with the extent to which you feel developed in the following traits and skills
3. Critical thinking skills
 4. Problem solving skills

Gen Ed Goal 3: Understanding Historical Processes and Cultural Differences

CIRP-

25. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark F. if you engaged in an activity one or more times but not frequently, mark O. Mark N if you have not performed the activity during the past year.

R. Socialized with someone of another racial/ethnic group.

38. Please indicate the importance to you personally of each of the following:

Q. Helping to promote racial understanding

U. Improving my understanding of other countries and cultures

NSSE-

1. In your experience at your institution during the current school year, about how often have you done each of the following? Mark answers in the boxes.

E. Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments.

U. Had serious conversations with students of a different race or ethnicity than your own.

V. Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values.

6. Which of the following have you done or do you plan to do before you graduate from your institution?

E. Foreign language coursework

F. Study abroad

8. To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

L. Understanding people of other racial and ethnic backgrounds.

9. To what extent does your institution emphasize each of the following?

- C. Encouraging contact among students from different economic, social, and racial or ethnic backgrounds.

15. Are you an international student or foreign national?

Alumni Survey-

- C. Please rate your satisfaction with the extent to which you feel developed in the following traits and skills
 - 5. Ability to accept and understand people with different values and beliefs
- D. Please reflect on the overall nature of your educational experiences at Northeastern. Indicate your level of agreement with these statements by checking the appropriate response.
 - 2. The university places an emphasis on understanding and respecting diversity (age, culture, language).
 - 3. The curriculum, courses and programs of the university contributed to my ability to work and live in a pluralistic society.
 - 4. The curriculum courses, and programs of the university utilized the resources of the greater metropolitan Chicago community to enhance student learning.

Gen Ed Goal 4: Understanding of Aesthetic and Literary Sensitivity

CIRP-

25. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark F. if you engaged in an activity one or more times but not frequently, mark O. Mark N if you have not performed the activity during the past year.

- T. Communicated via e-mail
- U. Visited an art gallery or museum

30. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

- B. Artistic ability
- K. Persistence

38. Please indicate the importance to you personally of each of the following:

- A. Art fine and applied
- L. Biology (general)

Gen Ed Goal 5: Understanding of Modes, Thoughts, and Methodologies

CIRP-

2. How old will you be on December 31 of this year?

- A. 16 or younger

- B. 17
- C. 18
- D. 19
- E. 20

Alumni Survey-

- A. Please respond to each question by evaluating your degree program as a whole.
 - 3. Professors encouraged me to challenge my own ideas, the ideas of other students, and those presented in readings and other course materials.
- C. Please rate your satisfaction with the extent to which you feel developed in the following traits and skills
 - 7. Knowledge of your major field of study

Gen Ed Goal 6: Use of Quantitative Methods in the Sciences

CIRP-

- 30. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself

- I. Mathematical ability

- 38. Please indicate the importance to you personally of each of the Following:

- J. Making a theoretical contribution to science