Degree Requirements
General education courses, the major, and electives are the three components of a university education. By completing a major, students learn to use the methods of a discipline to gain insight into its subject matter; about which they acquire some depth of knowledge. General education courses provide breadth of knowledge within a balanced liberal arts framework. Electives give students freedom to choose courses that enhance their educational goals beyond the basic requirements set by the faculty.

General education requirements help students to place the more specialized parts of their undergraduate study, their major and pre-professional training in a cultural and historical context. They also develop the intellectual skills necessary to enhance learning during the university years and later. In this complex world, distant places and history affect all human life. The knowledge of the variety, richness, and interdependence of the human experience that students gain during their undergraduate years will enrich their future professional and personal lives. The person with a broad education in the arts and sciences and with well-developed communication and quantitative skills is most likely to flourish in changing times.

State University of New York General Education Curriculum

The Trustees of the State University of New York have established a fundamental curriculum with specified learning outcomes that all students in colleges and universities in the state university system must have satisfied upon graduation. Stony Brook’s Diversified Education Curriculum (D.E.C.) has been reviewed and, in the best judgment of the faculty, incorporates these outcomes and expands upon them to ensure that Stony Brook’s graduates will have the intellectual skills and understanding necessary to flourish in their future professional and personal lives. The Diversified Education Curriculum requirements are detailed in the University Degree Requirements section later in this chapter. The SUNY general education curriculum specifies learning outcomes in the following areas:

Mathematics

Students must show competence in arithmetic, algebra, geometry, data analysis, and quantitative reasoning.

Stony Brook’s Entry Skill 1 Basic Mathematics Competence meets this learning outcome. Note that students must also satisfy category C of the Diversified Education Curriculum, Mathematical and Statistical Reasoning.

Basic Communication and Critical Thinking Competency

Students must identify, analyze, and evaluate arguments as they occur in their own or others’ work; develop well-reasoned arguments; produce coherent texts within common college-level written forms; demonstrate the ability to revise and improve such texts; research a topic, develop an argument, and organize supporting details; develop proficiency in oral discourse; and evaluate an oral presentation according to established criteria.

Stony Brook’s D.E.C. category A, English Composition, and the upper-division writing requirement and other major requirements, meet these learning outcomes.

Foreign Language

Students must demonstrate basic proficiency in the understanding and use of a foreign language and knowledge of the distinctive features of cultures associated with that language.

Stony Brook’s D.E.C. category B, Elementary Foreign Language Competence, meets these learning outcomes. Students must complete two semesters of an elementary foreign language if they have not earned an 85 or higher on the Regents examination in a foreign language.

Information Management

Students must perform the basic operations of personal computer use; understand and use basic research techniques; and locate, evaluate, and synthesize information from a variety of sources.

Stony Brook’s faculty expect that all students will acquire these skills early in their education at the University. D.E.C. and major requirements reinforce skills necessary to be successful in the 21st century.

Natural Sciences

Students must show 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 application of data, concepts, and models in one of the natural sciences.

Stony Brook’s D.E.C. category E, Natural Sciences, meets this learning outcome. Note that Stony Brook students must complete two category E courses and must also complete category H—Implications of Science and Technology.

Social Sciences

Students must demonstrate understanding of the methods of social scientists in exploring social phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical and interpretive analysis and knowledge of major concepts, models and issues of at least one discipline in the social sciences.

Stony Brook’s D.E.C. category F, Social and Behavioral Sciences, meets this learning outcome. Note that most Stony Brook students must complete two Category F courses.

American History

Students must demonstrate knowledge of a basic narrative of the political, economic, social, and cultural history of the United States, including knowledge of the unity and diversity of American society; knowledge of common institutions in American society and how they have affected different groups; and an understanding of America’s evolving relationship with the rest of the world.

For students who matriculated prior to Spring 2004: Stony Brook’s D.E.C. category K, American Pluralism, meets these learning outcomes. Students in B.A. or B.S. degree programs must complete one category K course. Students who graduate with a B.E. degree are not required to complete D.E.C. category K.

For students who matriculated in Spring 2004 or later: All students in the College of Arts and Sciences, College of Business, and Marine Sciences Research Center are expected to show basic competence in American History by passing a course designated as meeting “Skill 4: American History Competence.”

Western Civilization

Students must demonstrate knowledge of the development of the distinctive features of the history, institutions, economy, society, culture, etc., of Western civilization, and relate its development to that of other regions of the world.
Stony Brook’s D.E.C. category I European Traditions meets this learning outcome. Students must complete one category I course.

Other World Civilizations
Students must demonstrate knowledge of the distinctive features of the history, institutions, economy, society, culture, etc., of a non-Western civilization.

Stony Brook’s D.E.C. category J, The World Beyond European Traditions, meets this learning outcome. Students must complete one category J course.

Humanities
Students must demonstrate knowledge of the conventions and methods of at least one of the humanities in addition to those encompassed by other knowledge areas required by the SUNY general education curriculum.

Stony Brook’s D.E.C. categories B, Interpreting Texts in the Humanities, and G, Humanities and Fine Arts, satisfy this learning outcome. Note that all Stony Brook students must complete one category B course and most students must complete two category G courses.

The Arts
Students must demonstrate understanding of one of the principal forms of artistic expression and the creative process inherent to that art form.

Stony Brook’s D.E.C. category D, Understanding the Fine and Performing Arts, meets this learning outcome. Most students must complete one category D course.

Note to Transfer Students:
Students transferring to Stony Brook from other SUNY institutions should consult the Transfer Credit Policies section in the Academic Policies and Regulations chapter of this Bulletin for details on how their courses apply to Stony Brook’s Diversified Education Curriculum.

Note on Courses Satisfying D.E.C. Categories:
A student’s general education record may not be changed retroactively. The University may change the D.E.C. category of a course, but for a particular student, the course will count only toward the requirement it fulfilled at the time the student took the course.

University Degree Requirements

Note: The degree progress report, accessible through the SOLAR (Student OnLine Access to Records) System, is a computer-generated report indicating each student’s progress toward fulfilling degree requirements. The report is designed to be a helpful advisory tool and is not an official evaluation of a student’s progress.

Credit Hour Requirement
Bachelor of Arts degree: Completion of at least 120 credit hours of passing work.
Bachelor of Science degree: Completion of at least 120 credit hours of passing work.
Bachelor of Engineering degree: Completion of at least 128 credit hours of passing work.

Restrictions on the number of credits that may be counted toward graduation requirements are stated under “Limits on Course Credits and Grading Options” in the Academic Policies and Regulations chapter. Among the kinds of courses with restrictions are independent study, activity-related courses, and developmental and repeated courses.

Liberal Arts and Sciences Requirement
State education guidelines require students to complete a minimum number of credits in the liberal arts and sciences. Stony Brook degree requirements are structured so that students satisfy this requirement by completing the other requirements for the degree.

Residence Requirement
After the 57th credit, at least 36 credits must be earned at Stony Brook.

Notes:
1. Special restrictions apply to students earning a Bachelor of Engineering degree. Refer to the section “Additional Requirements/Restrictions for the B.E. Degree” below for details.
2. Credits earned in Study Abroad programs—except those sponsored by Stony Brook—do not count toward residency.
3. Credits earned in National Student Exchange programs do not count toward residency.

Grade Point Average (g.p.a.) Requirement
A minimum cumulative grade point average of 2.00 is required for all academic work at Stony Brook. (Note: Grades from other institutions are not included in the Stony Brook g.p.a.)

Major Requirement
Each candidate for a degree must satisfy the requirements of a declared major. Major requirements are detailed in the Approved Majors, Minors, and Programs chapter of this Bulletin. Students are required to declare a major upon earning 45 credits.

Upper-Division Credit Requirement
Each candidate must earn at least 39 credits in upper-division courses (numbered 300 and higher). Some of these credits may be earned through courses transferred from other colleges and individually evaluated at Stony Brook as upper division. See “Transfer Credit Policies” in the Academic Policies and Regulations chapter.

General Education Requirements: Entry Skills and Diversified Education Curriculum
Candidates for degrees in the College of Arts and Sciences, the College of Business, and the Marine Sciences Research Center must have satisfied Entry Skill 1: Basic Mathematics Competence; Entry Skill 2: Basic Writing Competence; Entry Skill 3: Elementary Foreign Language Competence; Entry Skill 4: American History Competence; and the Diversified Education Curriculum for these students detailed in this chapter.

Candidates for degrees in Applied Mathematics and Statistics, Computer Science, and Information Systems, Technological Systems Management, and candidates for the Bachelor of Engineering degree must have satisfied Entry Skill 1: Basic Mathematics Competence; Entry Skill 2: Basic Writing Competence; and the Diversified Education Curriculum for these students detailed in this chapter.

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Additional Requirements/Restrictions for the B.E. Degree

Residence Requirement
At least seven engineering courses (those with the designator BME, ESE, ESG, ESM, or MEC) and/or approved technical elective courses must be completed in the College of Engineering and Applied Sciences at Stony Brook. For the majors in biomedical, computer, electrical, and mechanical engineering, at least five of the seven courses must be offered by the department of the student's major.

The following courses may not be used to meet this requirement: ESE 211, 314, and 324; ESG 217, 312, and 316; MEC 200, 316, and 317; and ESE, ESG, BME, and MEC 300, 440, and 441. BME, ESE, ESG, and MEC 440 and 441 must be taken at Stony Brook.

Technical Electives
Students in majors leading to the B.E. degree must complete a defined number of technical elective courses in their major. A copy of technical elective requirements and the current list of approved technical elective courses for each engineering major are available in the relevant engineering department.

Entry Skills
All students in the College of Arts and Sciences, the College of Business, and the Marine Sciences Research Center are expected to show basic competence in mathematics, writing, a foreign language, and American history. Students directly admitted to the majors in the College of Engineering and Applied Sciences must show basic competence in mathematics and writing.

Skill 1: Basic Mathematics Competence
Students should be able to formulate and solve mathematical problems arising in their University work.

Basic Mathematics Competence may be satisfied before entering Stony Brook in any of the following ways:

1. By having passed, while in high school, the New York State Regents Examination in Sequential Mathematics III with a score of at least 75;
2. By having achieved a score of 530 or higher on the SAT II in mathematics; or a score of 560 or higher on the mathematics portion of the SAT I; or a score of 56 or higher on the mathematics portion of the PSAT; or a score of 23 or higher on the American College Testing (ACT) Test in Mathematics;
3. By having received a score of 3 or higher on an AP examination in calculus or statistics;
4. By having satisfied the SUNY general education requirement in mathematics.

All entering students who have not achieved basic mathematics competence must satisfy the requirement in one of the following ways:

- By scoring at placement level 3 or higher on the mathematics placement examination before or during their first year at Stony Brook. (See http://www.math.sunysb.edu/mpe.html for more information.) Students who do not attain the proficiency-level score must enroll in the appropriate course during their first year on this campus.
- By earning a grade of C or higher in the developmental class MAP 103 or in a transferred course of at least three credits evaluated by Stony Brook as equivalent to MAP 103. Credit toward graduation will not be given for such transferred courses taken after matriculation.
- By passing a Stony Brook course that meets the mathematics requirement of the Diversified Education Curriculum.
- By receiving credit for any transfer course evaluated as satisfying the mathematics requirement of the Diversified Education Curriculum. Students who received transfer credit for such a course taken under the auspices of a college while they were in high school must attain the proficiency-level grade on the University placement test to satisfy this requirement, unless the course was taken on the campus of an accredited college and taught by a member of the college faculty.
- By passing with a grade of C or higher, while enrolled in a degree program at any two- or four-year college, any other mathematics course (excluding basic arithmetic, elementary algebra, and business or finance mathematics courses) of at least three credits counting toward graduation.
- By obtaining Challenge credit for any MAT or AMS course.

Skill 2: Basic Writing Competence
Students should be able to formulate and express their ideas in a clear, articulate manner.

All entering students must take the University's writing placement examination, a diagnostic placement test. This exam may be taken only once. Students satisfy Skill 2 by scoring level 3 or higher on the University's writing placement examination or by having passed with a grade of C or higher a college composition course judged equivalent to WRT 101 or 102 or 103 or by receiving a score of 3, 4, or 5 on the AP English Language and Composition examination or the AP English Language and Literature examination. Students must begin satisfaction of writing competence in the first year and must take writing courses in sequence in successive semesters until the D.E.C. A English Composition requirement is satisfied.

Notes:
1. College courses taken while the student was in high school can only be considered for equivalency to WRT 101 or 102 or 103 if taken on the college campus.
2. Transfer students who have passed with a C or higher a course equivalent to WRT 101 or 102 or 103 need not take the placement examination.
3. Satisfaction of the SUNY general education requirement in basic communication and critical thinking does not satisfy Stony Brook's basic writing competence requirement.

Skill 3: Elementary Foreign Language Competence
Because of the increasing globalization of culture, society, and the economy, students should have an elementary knowledge of a foreign language. Students achieve foreign language competence before entering Stony Brook in any of the following ways:

- A third-year high school Regents examination score of 85 or higher;
- A score of 530 or higher on the SAT II in a foreign language;
- A grade of 85 or higher on a third-level high school foreign language course (for students from New York state whose high schools do not offer the
Regents examination and for out-of-state students; 
• Submitting secondary school transcripts and transcripts from previously attended universities that show a total of two years of formal language study in an institution where the language of instruction is other than English.

All entering students who have not achieved entry-level foreign language competence are urged to complete this requirement early in their academic careers. Students achieve foreign language competence at Stony Brook in one of the following ways:

• Enrolling in and passing with a letter grade of C or higher the second semester of an elementary foreign language course numbered 101 or 112, or enrolling in and passing a foreign language course at the intermediate level or higher;

• Obtaining equivalent transfer credit for a foreign language course numbered 101 or 112 or higher;

• Passing a Stony Brook Challenge examination for a foreign language course numbered 101 or 112 or higher;

• Receiving transfer credit for any foreign language course that meets the SUNY-GER elementary foreign language competence requirement unless the student meets the requirements outlined in “Guidelines for the Stony Brook Challenge Program,” available in the Academic and Pre-Professional Advising Center.

5. Students who know a language not offered at Stony Brook may satisfy their elementary foreign language competence requirement through the Challenge Examination Program by meeting the “Guidelines for the Stony Brook Challenge Program,” although no credit will be awarded.

6. Satisfaction of the SUNY general education requirement in foreign language does not satisfy Stony Brook’s elementary foreign language competence requirement.

Skill 4: American History Competence

The SUNY General Education American history requirement provides students with the knowledge of a basic narrative of American history—political, economic, social, and cultural—including knowledge of unity and diversity in American society. It enhances students’ knowledge of common institutions in American society and furthers their understanding of the United States’ evolving relationship with the rest of the world.

Students achieve American history competence in any of the following ways:

• Enrolling in and passing with a letter grade of C or higher the second semester of an elementary foreign language course numbered 101 or 112 or higher;

• Receiving transfer credit for any foreign language course that meets the SUNY-GER elementary foreign language requirement.

• Receiving transfer credit for any course that meets the SUNY-GER American history requirement.

• Scoring 3, 4, or 5 on the AP U.S. History exam or the AP U.S. Government and Politics exam.

D.E.C. courses are indicated in the Course Descriptions listings at the back of this Bulletin; the D.E.C. category letter (A through K) is tagged to the course number (e.g., WRT 103-A). Courses with a D.E.C. category tag that are taken for the major can also be used to satisfy the appropriate D.E.C. category.

Important Notes:

• All courses offered to satisfy D.E.C. requirements must be taken for a letter grade. Courses taken under the Pass/No Credit option will not satisfy D.E.C. requirements. Categories A and C must be passed with a grade of C or higher.

• A course is assigned to one D.E.C. category only and will satisfy only that category.

• If no letter tag appears after a course number, that course may not be used to satisfy any D.E.C. requirement.

• Coursework completed while registered for independent study courses (including directed readings and research courses) may not be used to satisfy any D.E.C. requirements.

• College courses taken while the student was in high school can only be evaluated for applicability to D.E.C. categories if the courses were taught on the college campus.

• AP, CLEP subject examinations, RCE, or Challenge credit, or other approved credit by examinations with appropriate scores, may be used to satisfy one course in each of the categories E, F, and G. Course credit by examination may not be used in any other category except students may use AP credit for the first course of category A and for category C.

• Transferred courses must carry at least three semester hours of credit to be applicable to any category.

• Courses transferred from SUNY institutions meeting SUNY general education requirements do not necessarily satisfy D.E.C. categories. See the section “Application of Transfer Credits to General Education Requirements” in the Academic Policies and Regulations chapter for details.

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DEGREE REQUIREMENTS

D.E.C. Requirements for Students with Majors in the College of Arts and Sciences, the College of Business, and the Marine Sciences Research Center

Students are encouraged to visit the Academic and Pre-Professional Advising Center for a formal review of their D.E.C. requirements at least two semesters prior to their expected date of graduation. Students can use these pages to record courses used toward these requirements.

University Skills

The first group of requirements—D.E.C. categories A-D—focuses on ways of learning essential to the entire academic experience and subject matter intrinsic to liberal learning.

Category A English Composition

A ____________, ____________

The ability to communicate effectively in written English is essential to success both in the University and in society. Students satisfy this requirement by passing WRT 101—Introductory Writing Workshop and WRT 102—Intermediate Writing Workshop A or WRT 103—Intermediate Writing Workshop B.

Notes:
1. A score of 4 or 5 on the University’s writing placement examination or a score of 3, 4, or 5 on the AP English/Comp or English/Lit examination satisfies the first course of the two-course requirement.
2. Students must begin completion of category A during their first year at Stony Brook and must take writing courses in sequence until the requirement is satisfied.
3. All transfer and rematriculated students who have passed, with a grade of C or higher, a composition course judged equivalent to WRT 102 or WRT 103 will have satisfied this requirement.
4. Once matriculated, the student must complete Category A at Stony Brook.

Category B Interpreting Texts in the Humanities

B ____________

Category B courses help students develop skills of interpretation and analysis that will enable them to examine subject matter critically, not only in the humanities, but in all other college courses.

Category C Mathematical and Statistical Reasoning

C ____________

Category C courses help students understand and use quantitative skills and ideas critical to higher education.

Notes:
1. The course offered for category C must be passed with a letter grade of C or higher.
2. A score of 4 or 5 on the AP mathematics examination or a score of 6 or higher on Stony Brook’s mathematics placement examination satisfies category C.

Category D Understanding the Fine and Performing Arts

D ____________

Category D courses acquaint students with the works of creative artists and performers and their artistic medium, such as art, music, or theatre. The basic terminology, analytical tools used to interpret one of the arts, and representative works in a particular field are examined. Such exposure is essential to intellectual growth and the development of a humanist foundation from which to approach other disciplines.

Disciplinary Diversity

The second group of requirements—D.E.C. categories E-G—exposes students to the modes of thinking, methods of study, and subject matter of major branches of knowledge—natural and physical sciences, social and behavioral sciences, and arts and humanities.

Category E Natural Sciences

E ____________

Category E courses expand students’ knowledge about objects and processes observable in nature, whether animate as in the biological sciences, or inanimate as in the physical sciences of chemistry or physics.

Category F Social and Behavioral Sciences

F ____________

Category F courses focus on individual and group behavior within society. These disciplines use methods such as historical analysis of documents, or survey and interview data, to observe and analyze human activity and society.

Category G Humanities

G ____________

Category G courses examine disciplines and methods that express the way people view the human condition.

Expanding Perspectives and Cultural Awareness

The final group of requirements—D.E.C. categories H-K—challenges students to confront their own perceptions of the world and the people in it. Courses in these categories build on study in the earlier categories.

Category H Implications of Science and Technology

H ____________

Category H courses are designed to help students understand the social and global implications of science and technology and to examine examples of the impact of science, culture, and society on one another.

Category I European Traditions

I ____________

Category I courses consider the Western cultural tradition through specialized study of a European nation or area from one or more viewpoints (e.g., historical, artistic, social, political).

Category J The World Beyond European Traditions

J ____________

Category J courses increase students’ understanding of a nation, region, or culture that is significantly different from the United States and Europe in at least one respect.

Category K American Pluralism

K ____________

Category K courses enable students to build upon their knowledge of diverse traditions in order to examine in detail the role of these traditions in forming American society. Some D.E.C. K courses explore our nation’s diversity of ethnic, religious, gender, and intellectual traditions through a multicultural perspective. Others explore the relationship of a specific ethnic, religious, or gender group to American society as a whole.
Students are encouraged to visit the College of Engineering and Applied Science Undergraduate Student Office for a formal review of their D.E.C. requirements at least two semesters prior to their expected date of graduation. Students can use these pages to record courses used toward these requirements.

**University Skills**

The first group of requirements—D.E.C. categories A-D—focuses on ways of learning essential to the entire academic experience and subject matter intrinsic to liberal learning.

### Category A

**English Composition**

2 courses

The ability to communicate effectively in written English is essential to success both in the University and in society. Students satisfy this requirement by passing WRT 101—Introductory Writing Workshop and WRT 102—Intermediate Writing Workshop A or WRT 103—Intermediate Writing Workshop B.

Notes:

1. A score of 4 or 5 on the University's writing placement examination or a score of 3, 4, or 5 on the AP English/Comp or English/Lit examination satisfies the first course of the two-course requirement.
2. Students must begin completion of category A during their first year at Stony Brook and must take writing courses in sequence until the requirement is satisfied.
3. All transfer and rematriculated students who have passed, with a grade of C or higher, a composition course judged equivalent to WRT 102 or WRT 103 will have satisfied this requirement.
4. Once matriculated, the student must complete Category A at Stony Brook.

### Category B

**Interpreting Texts in the Humanities**

1 course

Category B courses help students develop skills of interpretation and analysis that will enable them to examine subject matter critically, not only in the humanities, but in all other college courses.

### Category C

**Mathematical and Statistical Reasoning**

1 course

Category C courses help students understand and use quantitative skills and ideas critical to higher education.

### Category D

**Understanding the Fine and Performing Arts**

1 courses

Required only for Computer Science students who matriculate in Spring 2006 or later. Category D courses acquaint students with the works of creative artists and performers and their artistic medium, such as art, music, or theatre. The basic terminology, analytical tools used to interpret one of the arts, and representative works in a particular field are examined. Such exposure is essential to intellectual growth and the development of a humanist foundation from which to approach other disciplines.

### Category E

**Natural Sciences**

2 courses

Category E courses expand students' knowledge about objects and processes observable in nature, whether animate as in the biological sciences, or inanimate as in the physical sciences of chemistry or physics.

### Category F

**Social and Behavioral Sciences**

1 course

Category F courses focus on individual and group behavior within society. These disciplines use methods such as historical analysis of documents, or survey and interview data, to observe and analyze human activity and society.

### Category G

**Humanities**

1 course

Category G courses examine disciplines and methods that express the way people view the human condition.

### Category H

**Implications of Science and Technology**

1 course

Category H courses are designed to help students understand the social and global implications of science and technology and to examine examples of the impact of science, culture, and society on one another.

### Category I

**European Traditions**

1 course

Category I courses consider the Western cultural tradition through specialized study of a European nation or area from one or more viewpoints (e.g., historical, artistic, social, political).

### Category J

**The World Beyond**

1 course

Category J courses increase students' understanding of a nation, region, or culture that is significantly different from the United States and Europe in at least one respect.

Notes:

1. In choosing courses to satisfy D.E.C. I and J, students should choose one with a humanities designator and one with a social and behavioral sciences designator.
2. B.E. degree students may petition the Undergraduate Student Office for permission to substitute a category K course for a category I or J course.

### Category K

**American Pluralism**

1 course

Not required for students seeking the Bachelor of Engineering degree.

Category K courses enable students to build upon their knowledge of diverse traditions in order to examine in detail the role of these traditions in forming American society. Some D.E.C. K courses explore our nation's diversity of ethnic, religious, gender, and intellectual traditions through a multicultural perspective. Others explore the relationship of a specific ethnic, religious, or gender group to American society as a whole.

Notes:

1. The course offered for category C must be passed with a letter grade of C or higher.
2. A score of 4 or 5 on the AP mathematics examination or a score of 6 or higher on Stony Brook's mathematics placement examination satisfies category C.

Category D courses are required for Computer Science students who matriculate in Spring 2006 or later. Category D courses acquaint students with the works of creative artists and performers and their artistic medium, such as art, music, or theatre. The basic terminology, analytical tools used to interpret one of the arts, and representative works in a particular field are examined. Such exposure is essential to intellectual growth and the development of a humanist foundation from which to approach other disciplines.

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