



NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
H. Martin Lancaster, President

March 29, 2004

MEMORANDUM

TO: College Presidents
Chief Academic Officers

FROM: Delores A. Parker, Vice President
Academic and Student Services

SUBJECT: Curriculum Review Committee (CRC) Approvals

At the March 9, 2004, meeting of the Curriculum Review Committee (CRC), the CRC approved changes to core courses found on the following curriculum standards:

Associate of Arts: Elementary Education, Middle Grades Education,
and Special Education (A1010P)
Associate of Arts: English Education (A1010F)
Associate of Science: Mathematics Education (A1040F)
Occupational Education Associate (A55320)
Laboratory Technology (A20160)

I am pleased to inform you that the State Board of Community Colleges has authorized me to approve curriculum standard revisions effected by CRC course changes. The approved revised standards are attached.

Colleges approved to offer programs based on these curriculum standards should file electronic programs of study using the revised standards within one year of the effective term.

If you have questions or need additional information, please contact Darryl McGraw at 919-807-7108 or mcgrawd@ncccs.cc.nc.us.

DAP/DM/el
Attachments
c: Darryl McGraw
Judith Mann
Kristi Snuggs
Edith Lang
Barbara Barnett

CC04-071
E-mail

**Pre-Major Associate in Arts Articulation Agreement:
Elementary Education, Middle Grades Education, and Special Education (A1010P)**

This template has been developed by university and community college faculty as a blueprint for guiding community colleges in developing programs for students who intend to major in Elementary Education, Middle Grades Education, and Special Education. Students who successfully complete this course of study and who meet the requirements for admission to the university may be eligible to apply for admission to the major with junior standing.

All colleges will not offer all pre-major programs and course selections may vary. Check college catalogs for course and program offerings.

General Education Core (44 SHC)*Forty-four semester hours of credit in general education core courses are required as outlined on the NCCCS Curriculum Standards for Associate in Arts degree programs. The general education core includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition.

English Composition (6 SHC) *Two English composition courses are required.*

- English 111, Expository Writing, is required as the first composition course.
- The second composition course must be selected from the following:
 - ENG 112 Argument-Based Research (3 SHC)
 - ENG 113 Literature-Based Research (3 SHC)

Humanities/Fine Arts (12 SHC) *Four courses from three discipline areas are required.*

- One course must be a literature course. Select one course from the following (3 SHC):
 - ENG 131 Introduction to Literature (3 SHC) *or*
 - ENG 231 American Literature I (3 SHC) *or*
 - ENG 232 American Literature II (3 SHC) *or*
 - ENG 233 Major American Writers (3 SHC)
- The following course is required to substitute for 3 SHC of Humanities/Fine Arts:
 - COM 231 Public Speaking (3 SHC)
- One of the following courses is required (3 SHC):
 - ART 111 Art Appreciation (3 SHC) *or*
 - ART 114 Art History Survey I (3 SHC) *or*
 - ART 115 Art History Survey II (3 SHC) *or*
 - MUS 110 Music Appreciation (3 SHC)
- One additional course from the following discipline areas is required: music, art, drama, dance, foreign languages, interdisciplinary humanities, literature, philosophy, and religion.

Social/Behavioral Sciences (12 SHC) *Four courses from three discipline areas are required.*

- One course must be a history course. Select one course from the following (3 SHC):
 - HIS 111 World Civilizations I (3 SHC) *or*
 - HIS 112 World Civilizations II (3 SHC) *or*
 - HIS 114 Comparative World History (3 SHC) *or*
 - HIS 115 Introduction to Global History (3 SHC) *or*
 - HIS 121 Western Civilization I (3 SHC) *or*
 - HIS 122 Western Civilization II (3 SHC)
- The following courses are required (6 SHC):
 - PSY 150 General Psychology (3 SHC)

choose one:

 - SOC 210 Introduction to Sociology (3 SHC) *or*
 - SOC 225 Social Diversity (3 SHC)
- One additional course from the following discipline areas is required: anthropology, economics, geography, history, political science, psychology, and sociology.

Natural Sciences/Mathematics (14 SHC)

Natural Sciences (8 SHC):

- The following courses are required:
 - choose one:*
 - BIO 110 Principles of Biology (4 SHC) *or*
 - BIO 111 General Biology I (4 SHC)
 - choose one:*
 - CHM 131 Intro to Chemistry (3 SHC) *and* CHM 131A Intro to Chemistry Lab (1 SHC) *or*
 - CHM 135 Survey of Chemistry I (4 SHC) *or*
 - CHM 151 General Chemistry I (4 SHC) *or*
 - PHY 110 Conceptual Physics (3 SHC) *and* PHY 110A Conceptual Physics Lab (1 SHC) *or*
 - PHY 151 College Physics I (4 SHC)

Mathematics (6 SHC):

- Two of the following courses are required:
 - CIS 110 Introduction to Computers (3 SHC)
 - MAT 140 Survey of Mathematics (3 SHC)
 - MAT 141 Mathematical Concepts I (3 SHC)
 - MAT 142 Mathematical Concepts II (3 SHC)
 - MAT 161 (or higher) College Algebra (3 SHC)

Other Required Hours (20-21 SHC)* Colleges may include courses in health, physical education, college orientation, and/or study skills as other required hours. Work experience up to 1 SHC may be included for career exploration.

- At certain UNC institutions, EDU 216 may fulfill a major requirement; at a majority of institutions it will transfer only as a free elective.
- It is recommended that within the 20 semester hours of “Other Required Hours,” pre-education students in Elementary Education, Middle Grades Education, and Special Education select courses that will help meet the mandated academic (second major) concentration. These courses should be selected in conjunction with the requirements at each university, since available academic (second major) concentrations and their specific requirements differ on each campus. In order to be consistent with NC licensure areas, Middle Grades Education students should select courses from up to two (2) of the following areas: Social Sciences, English, Mathematics, Sciences. (Note: UNC-Asheville students major in an academic area and the selected 20 hours should be in sync with their intended major/program.) Typically offered academic concentrations are biology, English, history, mathematics, and psychology. The following recommended courses in these concentrations may be taken as general education or as “Other Required Hours.”

Recommended Courses for Typical Academic Concentrations

Biology Up to 12 SHC from the following:

BIO 110 Principles of Biology *or* BIO 111 General Biology I *and* BIO 112 General Biology II;
BIO 120 Intro. Botany *or* BIO 130 Intro. Zoo. *or* BIO 140 Environ. Bio. *and* BIO 140A Environ. Bio. Lab;
CHM 151 General Chemistry I
CHM 152 General Chemistry II

English Up to 6 SHC from the following:

ENG 231 American Lit. I	ENG 261 World Lit. I	ENG 272 Southern Lit.
ENG 232 American Lit. II	ENG 262 World Lit. II	ENG 273 African-Amer. Lit.
ENG 241 British Lit. I	ENG 265 Thematic World Lit. I	ENG 274 Lit. by Women
ENG 242 British Lit. II	ENG 266 Thematic World Lit. II	

History

6 SHC from the following should be taken as general education:
HIS 111 World Civilizations I *and* HIS 112 World Civilizations II *or*
HIS 121 Western Civilization I *and* HIS 122 Western Civilization II

6 SHC from the following should be taken as “other required hours:”

HIS 131 American History I *and* HIS 132 American History II

Mathematics Up to 12 SHC from the following:

MAT 151 Stat. I, MAT 151A Statist. I Lab. *or* MAT 155 Statist. Analy., MAT 155A Statist. Analy. Lab;
MAT 172 Precal. Trig., MAT 172A Precal. Trig. Lab *or* MAT 175 Precal., MAT 175A Precalculus Lab;
MAT 271 Calculus I
MAT 272 Calculus II

Psychology Select from:

PSY 150 General Psychology	PSY 241 Develop. Psychology	PSY 263 Educational Psychology
PSY 237 Social Psychology	PSY 243 Child Psychology	PSY 275 Health Psychology
PSY 239 Psy. of Personality	PSY 246 Adolescent Psychology	PSY 281 Abnormal Psychology

Total Semester Hours Credit (SHC) in Program: 64-65

* **Students must meet the receiving university’s foreign language and/or health and physical education requirements,**

Application to a University

Admission application deadlines vary; students must meet the deadline for the university to which they plan to transfer. Upon completion of the associate in arts degree, students who meet the requirements outlined in this pre-major articulation agreement for Elementary Education, Middle Grades Education, and Special Education will be eligible to be considered for admission as juniors to the universities offering the baccalaureate degree:

Elementary Education: ASU, ECU, ECSU, FSU, NCA&T, NCCU, UNC-A, UNC-C, UNC-CH, UNC-G, UNC-P, UNC-W, WCU, and WSSU.

Middle Grades Education: ASU, ECU, ECSU, FSU, NCCU, NCSU, UNC-A, UNC-C, UNC-CH, UNC-G, UNC-P, UNC-W, WCU, and WSSU.

Special Education: ASU, ECU, ECSU, NCA&T, UNC-C, UNC-CH, UNC-P, UNC-W, WCU, and WSSU.

Admission to the Major

Grade point average requirements vary and admission is competitive across the several programs in Elementary Education, Middle Grades Education, and Special Education. Minimum statewide requirements are:

1. Minimum 2.5 grade point average on a 4.0 scale.
2. Satisfactory passing scores as established by the State Board of Education on PRAXIS PPST-Reading; PPST-Writing; PPST-Math.

Receiving institutions may have additional requirements, prerequisites, and/or proficiencies. Since these vary at receiving institutions, students should review the admission to teacher education requirements for the institutions(s) they anticipate attending.

Pre-Major Associate in Arts Articulation Agreement: English Education (A1010F)

This template has been developed by university and community college faculty as a blueprint for guiding community colleges in developing programs for students who intend to major in English Education. Students who successfully complete this course of study and who meet the requirements for admission to the university are eligible to apply for admission to the major with junior standing.

All colleges will not offer all pre-major programs and course selections may vary. Check college catalogs for course and program offerings.

<p>General Education Core (44 SHC)* Forty-four semester hours of credit in general education core courses are required as outlined on the NCCCS Curriculum Standards for Associate in Arts degree programs. The general education core includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition.</p>
<p>English Composition (6 SHC) <i>Two English composition courses are required.</i></p> <ul style="list-style-type: none">English 111, Expository Writing, is required as the first composition course.One of the following courses is required to satisfy the second English requirement: ENG 112 Argument-Based Research (3 SHC) <i>or</i> ENG 113 Literature-Based Research (3 SHC)
<p>Humanities/Fine Arts (12 SHC**) <i>Four courses from three discipline areas are required.</i></p> <ul style="list-style-type: none">One course must be a literature course.Three additional courses from the following discipline areas are required: music, art, drama, dance, foreign languages, interdisciplinary humanities, literature, philosophy, and religion. One of the following fine arts courses is recommended: ART 111 Art Appreciation (3 SHC) <i>or</i> DAN 110 Dance Appreciation (3 SHC) <i>or</i> DRA 111 Theatre Appreciation (3 SHC) <i>or</i> HUM 160 Introduction to Film (3 SHC) <i>or</i> MUS 110 Music Appreciation (3 SHC) One of the following foreign language sequences is recommended: ASL 111 & 112 Elementary ASL I & II (6 SHC) <i>or</i> FRE 111 & 112 Elementary French I & II (6 SHC) <i>or</i> GER 111 & 112 Elementary German I & II (6 SHC) <i>or</i> ITA 111 & 112 Elementary Italian I & II (6 SHC) <i>or</i> JPN 111 & 112 Elementary Japanese I & II (6 SHC) <i>or</i> LAT 111 & 112 Elementary Latin I & II (6 SHC) <i>or</i> POR 111 & 112 Elementary Portuguese I & II (6 SHC) <i>or</i> RUS 111 & 112 Elementary Russian I & II (6 SHC) <i>or</i> SPA 111 & 112 Elementary Spanish I & II (6 SHC)
<p>Social/Behavioral Sciences (12 SHC) <i>Four courses from three discipline areas are required.</i></p> <ul style="list-style-type: none">One course must be a history course.The following course is required (3 SHC): PSY 150 General Psychology (3 SHC)Two courses from the following discipline areas are required, to include one additional discipline: anthropology, economics, geography, history, political science, psychology, and sociology. One of the following courses is recommended: HIS 111 World Civilizations I (3 SHC) HIS 112 World Civilizations II (3 SHC) HIS 121 Western Civilization I (3 SHC) HIS 122 Western Civilization II (3 SHC)
<p>Natural Sciences/Mathematics (14 SHC)</p> <p><i>Natural Sciences (8 SHC):</i> Two courses from the biological and physical science disciplines, including accompanying laboratory work, are required.</p> <p><i>Mathematics (6 SHC):</i> Two courses are required.</p> <ul style="list-style-type: none">One course must be in introductory mathematics.The second course may be a higher level mathematics course or may be selected from among other quantitative subjects, such as computer science (CIS) and statistics (MAT).

Other Required Hours (20-21 SHC)* Colleges may include courses in health, physical education, college orientation, and/or study skills as other required hours. Work experience up to 1 SHC may be included for career exploration.

- The following course is required (4 SHC):
EDU 216 Foundations in Education (4 SHC)
- 16 additional hours of approved college transfer courses are required.
The following course is recommended:
COM 231 Public Speaking (3 SHC)

An intermediate foreign language sequence is recommended:

ASL 211 and 212 Intermediate ASL I & II (6 SHC) *or*
FRE 211 and 212 Intermediate French I & II (6 SHC) *or*
GER 211 and 212 Intermediate German I & II (6 SHC) *or*
ITA 211 and 212 Intermediate Italian I & II (6 SHC) *or*
JPN 211 and 212 Intermediate Japanese I & II (6 SHC) *or*
LAT 211 and 212 Intermediate Latin I & II (6 SHC) *or*
POR 211 and 212 Intermediate Portuguese I & II (6 SHC) *or*
RUS 211 and 212 Intermediate Russian I & II (6 SHC) *or*
SPA 211 and 212 Intermediate Spanish I & II (6 SHC)

One of the following courses with multicultural or gender emphasis is recommended:

ENG 265 Thematic World Literature I (3 SHC) *or*
ENG 266 Thematic World Literature II (SHC) *or*
ENG 272 Southern Literature (3 SHC) *or*
ENG 273 African-American Literature (3 SHC) *or*
ENG 274 Literature by Women (3 SHC) *or*
HIS 151 Hispanic Civilization (3 SHC) *or*
HIS 162 Women and History (3 SHC) *or*
HIS 221 African-American History (3 SHC) *or*
SOC 225 Social Diversity (3 SHC) *or*
SOC 230 Race and Ethnic Relations (3 SHC)

Two additional 200-level survey courses in literature are recommended.

Total Semester Hours Credit (SHC) in Program: 64-65

- * **Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.**
- ** **3 SHC in Speech/Communication may be substituted for 3 SHC in Humanities/Fine Arts. Speech/Communication may not substitute for the literature requirement.**

Application to a University

Admission application deadlines vary; students must meet the deadline for the university to which they plan to transfer. Upon successful completion of the associate in arts degree, students who meet the requirements outlined in this pre-major articulation agreement for English Education will be eligible to be considered for admission as juniors to the universities offering the baccalaureate degree: ASU, ECU, ECSU, FSU, NCA&T, NCCU, NCSU, UNC-A, UNC-CH, UNC-C, UNC-G, UNC-P, UNC-W, WCU, WSSU.

Admission to the Major

Grade point average requirements vary and admission is competitive across the several programs in English Education. Admission to teacher licensure programs requires satisfactory scores on PRAXIS I and II.

Pre-Major Associate in Science Articulation Agreement: Mathematics Education (A1040F)

This template has been developed by university and community college faculty as a blueprint for guiding community colleges in developing programs for students who intend to major in Mathematics Education. Students who successfully complete this course of study and who meet the requirements for admission to the university may be eligible to apply for admission to the major with junior standing.

All community colleges will not offer all pre-major programs and course selections may vary. Check college catalogs for course and program offerings.

<p>General Education Core (44 SHC)* Forty-four semester hours of credit in general education core courses are required as outlined on the NCCCS Curriculum Standards for Associate in Science degree programs. The general education core includes study in the areas of humanities and fine arts, social and behavioral sciences, natural sciences and mathematics, and English composition.</p>										
<p>English Composition (6 SHC) <i>Two English composition courses are required.</i></p> <ul style="list-style-type: none"> English 111, Expository Writing, is required as the first composition course. The second composition course must be selected from the following: <table border="0"> <tr> <td>ENG 112</td> <td>Argument-Based Research (3 SHC)</td> </tr> <tr> <td>ENG 113</td> <td>Literature-Based Research (3 SHC)</td> </tr> <tr> <td>ENG 114</td> <td>Professional Research and Reporting (3 SHC)</td> </tr> </table> 	ENG 112	Argument-Based Research (3 SHC)	ENG 113	Literature-Based Research (3 SHC)	ENG 114	Professional Research and Reporting (3 SHC)				
ENG 112	Argument-Based Research (3 SHC)									
ENG 113	Literature-Based Research (3 SHC)									
ENG 114	Professional Research and Reporting (3 SHC)									
<p>Humanities/Fine Arts (12 SHC**) <i>Four courses from three discipline areas are required.</i></p> <ul style="list-style-type: none"> One course must be a literature course. Three additional courses from the following discipline areas are required: music, art, drama, dance, foreign languages, interdisciplinary humanities, literature, philosophy, and religion. 										
<p>Social/Behavioral Sciences (12 SHC) <i>Four courses from three discipline areas are required.</i></p> <ul style="list-style-type: none"> One course must be a history course. The following courses are required (6 SHC): <table border="0"> <tr> <td>PSY 150</td> <td>General Psychology (3 SHC)</td> </tr> <tr> <td>PSY 241</td> <td>Developmental Psychology (3 SHC)</td> </tr> </table> One additional course from the following discipline areas is required: anthropology, economics, geography, political science, and sociology. 	PSY 150	General Psychology (3 SHC)	PSY 241	Developmental Psychology (3 SHC)						
PSY 150	General Psychology (3 SHC)									
PSY 241	Developmental Psychology (3 SHC)									
<p>Natural Sciences/Mathematics (16 SHC)</p> <p><i>Natural Sciences (8 SHC):</i></p> <ul style="list-style-type: none"> The following physics sequence is required: <table border="0"> <tr> <td>PHY 251</td> <td>General Physics I (4 SHC)</td> </tr> <tr> <td>PHY 252</td> <td>General Physics II (4 SHC)</td> </tr> </table> <p><i>Mathematics (8 SHC):</i></p> <ul style="list-style-type: none"> The following mathematics courses are required: <table border="0"> <tr> <td>MAT 175</td> <td>Precalculus I (4 SHC)</td> </tr> <tr> <td>MAT 271</td> <td>Calculus I (4 SHC)</td> </tr> </table> 	PHY 251	General Physics I (4 SHC)	PHY 252	General Physics II (4 SHC)	MAT 175	Precalculus I (4 SHC)	MAT 271	Calculus I (4 SHC)		
PHY 251	General Physics I (4 SHC)									
PHY 252	General Physics II (4 SHC)									
MAT 175	Precalculus I (4 SHC)									
MAT 271	Calculus I (4 SHC)									
<p>Other Required Hours (18-19 SHC)* Colleges may include courses in health, physical education, college orientation, and/or study skills as other required hours. Work experience up to 1 SHC may be included for career exploration.</p>										
<ul style="list-style-type: none"> The following courses are required (18 SHC): <table border="0"> <tr> <td>CSC 134</td> <td>C++ Programming (3 SHC)</td> </tr> <tr> <td>EDU 216</td> <td>Foundations in Education (4 SHC)</td> </tr> <tr> <td>MAT 272</td> <td>Calculus II (4 SHC)</td> </tr> <tr> <td>MAT 273</td> <td>Calculus III (4 SHC)</td> </tr> <tr> <td>MAT 280</td> <td>Linear Algebra (3 SHC)</td> </tr> </table> 	CSC 134	C++ Programming (3 SHC)	EDU 216	Foundations in Education (4 SHC)	MAT 272	Calculus II (4 SHC)	MAT 273	Calculus III (4 SHC)	MAT 280	Linear Algebra (3 SHC)
CSC 134	C++ Programming (3 SHC)									
EDU 216	Foundations in Education (4 SHC)									
MAT 272	Calculus II (4 SHC)									
MAT 273	Calculus III (4 SHC)									
MAT 280	Linear Algebra (3 SHC)									
<p>Total Semester Hours Credit (SHC) in Program: 64-65</p>										

* Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution.

** 3 SHC in Speech/Communication may be substituted for 3 SHC in Humanities/Fine Arts. Speech/Communication may not substitute for the literature requirement.

Application to a University

Admission application deadlines vary; students must meet the deadline for the university to which they plan to transfer. Upon successful completion of the associate in science degree, students who meet the requirements outlined in this pre-major articulation agreement for Mathematics Education will be eligible to be considered for admission as juniors to the universities offering the baccalaureate degree: ASU, ECU, ECSU, FSU, NCA&T, NCCU, NCSU, UNC-A, UNC-CH, UNC-C, UNC-G, UNC-P, UNC-W, WCU, WSSU.

Admission to the Major

Grade point average requirements vary and admission is competitive across the several programs in Mathematics Education. Admission to teacher licensure programs requires satisfactory scores on PRAXIS I and II.

CURRICULUM STANDARD

Effective Term
Fall 2004
[2004*03]

Curriculum Program Title	Occupational Education Associate	Code	A55320
Concentration	(not applicable)		

Curriculum Description

The Occupational Education Associate curriculum is designed for individuals skilled and experienced in a trade or technical specialty who would like to receive an associate degree in preparation for teaching or other purposes.

Course work is designed to supplement previous education, training, and/or experience the individual has already attained.

Graduates of the program may find employment as instructors in the field of occupational education.

*Curriculum Requirements**

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in a degree or diploma program up to a maximum of 8 semester hours and in a certificate program up to a maximum of 2 semester hours. (*see back of page for Major Hours requirements*)
- III. Other Required Hours.** A college may require other subjects or courses to complete graduation requirements. These requirements may include electives, orientation, study skills courses, or other graduation requirements.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit in Program	64-76	36-48	12-18

*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematics skills, and basic use of computers.

Major Hours

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration (if applicable).** A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degree and diploma curriculum programs up to a maximum of 8 semester hours credit and in certificate programs up to a maximum of 2 semester hours credit.

Occupational Education Associate A55320

	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE <i>Courses required for the diploma are designated with an *</i> Required Courses: * EDU 175 Intro to Trade and Industrial Education 3 SHC EDU 176 Occupational Analysis & Course Development 3 SHC * EDU 177 Instructional Methods 3 SHC * EDU 186 Reading & Writing for Teachers 3 SHC * EDU 271 Educational Technology 3 SHC * ISC 121 Environmental Health and Safety 3 SHC Required Subject Areas: *Select One of the following: EDU 179 Vocational Student Organizations 3 SHC EDU 240 Work-Based Learning Practices & Techniques 3 SHC	21 SHC	18 SHC	18 SHC
B. CONCENTRATION (Not applicable)			
C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> Prefixes for major courses for curriculums approved to be offered by the college.			

CURRICULUM STANDARD

Effective Term
Fall 2004
[2004*03]

Curriculum Program Title

Laboratory Technology

Code

A20160

Concentration

(not applicable)

Curriculum Description

The Laboratory Technology curriculum prepares individuals for entry-level positions in a wide range of industries that perform laboratory testing of chemical, biological, and physical agents. Instruction is focused on the practical, hands-on skills required by industrial research laboratories and production facilities.

Students will receive instruction in basic laboratory procedures such as preparation of reagents and culture media, instrumentation, preparation and execution of protocols, quality assurance, safety, recording and reporting of experimental data, sterility, microbiology, chromatography, and electrophoresis.

Graduates should qualify for employment opportunities in research, food processing, environmental monitoring, chemical production, and textile, agricultural, and pharmaceutical industries.

*Curriculum Requirements**

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in a degree or diploma program up to a maximum of 8 semester hours and in a certificate program up to a maximum of 2 semester hours. (*see back of page for Major Hours requirements*)
- III. Other Required Hours.** A college may require other subjects or courses to complete graduation requirements. These requirements may include electives, orientation, study skills courses, or other graduation requirements.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit in Program	64-76	36-48	12-18

*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematics skills, and basic use of computers.

Major Hours

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration (if applicable).** A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degree and diploma curriculum programs up to a maximum of 8 semester hours credit and in certificate programs up to a maximum of 2 semester hours credit.

Laboratory Technology A20160

	AAS	Diploma	Certificate												
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC												
<p>A. CORE <i>A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the required subject/course core of the AAS degree.</i></p> <p>Required Courses:</p> <table> <tr> <td>LBT 110</td> <td>Laboratory Methods I</td> <td>5 SHC</td> </tr> <tr> <td>LBT 125</td> <td>Laboratory Instrumentation</td> <td>2 SHC</td> </tr> <tr> <td>LBT 210</td> <td>Laboratory Methods II</td> <td>5 SHC</td> </tr> <tr> <td>LBT 250</td> <td>Laboratory Methods III</td> <td>5 SHC</td> </tr> </table> <p>Required Subject Areas: None</p>	LBT 110	Laboratory Methods I	5 SHC	LBT 125	Laboratory Instrumentation	2 SHC	LBT 210	Laboratory Methods II	5 SHC	LBT 250	Laboratory Methods III	5 SHC	17 SHC	12 SHC	
LBT 110	Laboratory Methods I	5 SHC													
LBT 125	Laboratory Instrumentation	2 SHC													
LBT 210	Laboratory Methods II	5 SHC													
LBT 250	Laboratory Methods III	5 SHC													
<p>B. CONCENTRATION <i>(Not applicable)</i></p>															
<p>C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i></p> <p>ACC, BIO, BUS, CHM, CIS, COE, COM, CSC, HEA, ISC, LBT, MAT, PHY and **SPA</p> <p><i>** This prefix is limited to a maximum of 3 SHC</i></p>															