



*Northeast Alabama Community College*  
Curriculum Committee  
Minutes

**Meeting:** The Curriculum Committee held a meeting on June 30, 2016, at 1:00 p.m.

**Present:** Sherry Whitten, Greg Millican, Rob Woodall, Haley Johnson, Dr. Julia Everett, Jody Ragsdale, Dr. Joe Burke, Rodney Land, Jane Hopson, Angie Stewart, Brad Fricks, Sherie Grace, Joan Reeves

**Not Present:** Shelia Barnes

**Old Business:** Chair Rodney Land convened the meeting. He asked the committee to review the May 17 minutes (*see addendum*). There were no suggested changes; the minutes were approved by acclamation.

**New Business:**

Mr. Land asked Ms. Haley Johnson to present the OAD degree plan changes. Ms. Johnson asked if the OAD degree plan changes could be addressed at a later meeting because Ms. Amy LaCount, OAD instructor, was unavailable to attend the meeting. Committee members agreed.

Ms. Joan Reeves presented an *Application for Addition to the Curriculum* for RDG 084. Ms. Reeves stated that the state task force for Developmental Education decided that RDG 084 should be offered instead of RDG 083. She explained that RDG 084 is essentially the same course as RDG 083. Ms. Angie Stewart stated that the course does not need to be listed as an equivalent in the Alliant system/curriculum. The committee members discussed whether or not the course should be listed as an equivalent or a replacement for RDG 083. After discussion, it was agreed that NACC will not offer RDG 083 from this point forward, and RDG 084 and RDG 083 will have the same tracking number in the Alliant system/curriculum. Dr. Mike Kennamer made a motion to approve the *Application for Addition to the Curriculum*; Ms. Stewart seconded the motion. All members present voted in favor of the motion.

Ms. Reeves presented changes to the ENG 101 syllabus and Program Learning Outcomes (PLO). As stated on the PLO form, "To ensure a more objective, consistent evaluation of the Program Learning Outcome, the assessment has been changed to include an English Department panel grading of the impromptu essay, using the department rubric" (*see addendum*). Ms. Reeves stated that this change will require more time and effort from English department instructors, but it will improve the way that the college evaluates the written communication outcome. Ms. Reeves stated that full-time, part-time, and dual-enrollment instructors will be required to participate in the panel sessions. Dean Grace stated that dual-enrollment courses will be evaluated more closely by SACSCOC, and this new assessment method will be a good way to document the quality of student work.

Dean Grace made the motion to approve the changes in the syllabus and Program Learning Outcomes for ENG 101; Mr. Brad Fricks seconded the motion. All members present voted in favor of the motion.

Dr. Kennamer submitted an *Application for the Addition of a Program to the Curriculum* for Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR, or ACR). Dr. Kennamer stated the application is for a Short-Term Certificate program, Certificate program, and Associate of Applied Science program. Dr. Kennamer also supplied the committee with a list of program requirements (*see addendum*). He stated that a Plan of Instruction is available for all courses except ACR 144 and ACR 192.

The following courses were included in the Application for the Addition of a Program to the Curriculum:

New courses to add to curriculum/catalog (**bold indicates required courses**):

<b>ACR 111</b>	<b>ACR 112</b>
<b>ACR 113</b>	ACR 119
ACR 120	<b>ACR 121</b>
<b>ACR 122</b>	<b>ACR 123</b>
ACR 125	ACR 126
ACR 127	ACR 128
ACR 132	ACR 133
ACR 134	ACR 135
<b>ACR 144 (no POI)</b>	ACR 147
ACR 148	ACR 149
ACR 152	<b>ACR 192 (no POI)</b>
ACR 203	ACR 205

Additional courses in ACR course directory pending submission of syllabus (do not add to catalog or curriculum at this time):

ACR 130	ACR 138
ACR 141	ACR 150
ACR 151	ACR 181
ACR 182	ACR 183
ACR 184	ACR 185
ACR 186	ACR 187
ACR 200	ACR 202
ACR 212	ACR 214

Ms. Stewart asked if the program starts in the fall; Dr. Kennamer responded that it does. Ms. Reeves asked where the program is being taught. Dr. Kennamer responded that programs in Workforce Development are currently moving classes and equipment around; the HVAC-ACR courses will be taught in the Industry Training Center.

Dr. Kennamer also mentioned that there is an HVAC instructor position available and posted. He stated that the program will be available during the day for the fall semester and a nighttime cohort will be added in the spring.

Dean Grace asked if the program would be available in the Alliant system/curriculum for the fall or summer semester. Dr. Kennamer responded that since we have been approved by the Alabama Commission on Higher Education and the Alabama Community College System Board of Trustees, the program can be added to the curriculum for the summer 2016 semester.

Mr. Land reminded the committee that four ACR courses have been approved previously: ACR 111, 121, 144, and 147.

Ms. Stewart made a motion to accept the *Application for Addition of a Program to the Curriculum*. Mr. Jody Ragsdale seconded the motion. All members present approved the motion.

Dr. Kennamer presented *Applications for Additions to the Curriculum* for the following courses:

MTT 134 (3 hrs)

MTT 135 (3 hrs)

(previously taught as 6 credit hour course MTT 129)

MTT 147 (3 hrs)  
MTT 148 (3 hrs)  
(previously taught as 6 credit hour course MTT 100)

MTT 149 (3 hrs)  
MTT 150 (3 hrs)  
(previously taught as 6 credit hour course MTT 103)

MTT 162 (3 hrs)  
MTT 163 (3 hrs)  
(previously taught as 6 credit hour course MTT 146)

Dr. Kennamer also submitted an *Application for Addition to the Curriculum* for MTT 218.

After discussion, Ms. Reeves made a motion to accept the changes to the MTT courses; Mr. Ragsdale seconded the motion. All members present approved the motion.

Dr. Julia Everett, Chair of the Syllabus and Curriculum Review Sub-Committee, gave a report. She presented the following recommendation made by the sub-committee:

**Addendum to the “Addition of New Programs to the Curriculum” Policy and Procedure**

Once a course is approved by the Curriculum Committee, there is no delay in putting it in the curriculum (Alliant System) and degree plan, whether or not a syllabus is approved.

The sub-committee also recommended striking “Not every course that is added to the curriculum will be added to the catalog” from the fourth paragraph.

Dr. Everett stated that the addendum was created to make the process of reviewing syllabi, transfer guides, and degree plans smoother and cleaner.

Dr. Kennamer, a member of the sub-committee, added that the purpose of the addendum is help ensure that degree plans in the Alliant System are correct.

Dr. Everett added that since changes are continually made to our programs, the printed college catalog will always contain outdated information, but the degree plans in the Alliant System need to be correct.

Ms. Jane Hopson made a motion to accept the recommendation from the subcommittee and to add the addendum and proposed changes to the policy and procedure. Mr. Fricks seconded the motion. All members present approved the motion.

Ms. Stewart raised a question about adding courses to the system. The committee discussed the topic. Dean Grace stated that students cannot rely on degree plans or use them as a tool if the courses needed for their program or degree are not input in the system (so that they appear on the degree plan in NOAH). Dean Grace mentioned that incorrect degree plans affect the career/technical programs more, because those programs change more often to meet industry standards. Ms. Hopson added that the new addendum will allow the degree plans to be updated, which will allow the student and their advisor to see the entire degree.

Dr. Everett suggested that the Syllabus and Curriculum Review Sub-Committee had completed its charge. After discussion, Ms. Reeves made a motion to dissolve the subcommittee. Ms. Hopson seconded the motion. All members present approved the motion.

In order to make the advising and graduation processes more efficient and easier for students, Dean Grace asked the committee to reflect on the purpose of the following documents: degree plans in the college catalog, degree plans in the Alliant system, and the programs of study/transfer guides published

on the NACC website. Dean Grace stated that often the information included in all of these documents does not match, and she asked the committee if its efforts should be focused on one area. Mr. Land asked the committee to start thinking on these issues. Dean Grace asked committee members to consider the purpose of each document and whether or not it is possible to streamline the process. Mr. Fricks added that the general consensus at the subcommittee meeting was that once degree plans are updated and correct through the Alliant system/curriculum, then the printed degree plans from the website are redundant. Ms. Stewart stated that the printed degree plan from the website is useful for her during graduation processing and cap and gown orders; she stated that the degree plan in the Alliant system is usually incorrect. Mr. Fricks explained that the goal was to make changes to the degree plans in Alliant to ensure that they are correct.

Dean Grace stated that the committee can work toward improving the degree plans in the Alliant system/NOAH over the next year with the intent of using the degree plans in Alliant/NOAH for advising purposes. She stated that it would be helpful for advisors and students to start using them and noticing errors. She stated that financial aid payments are based on the courses that are listed in the degree plan in the Alliant system and that it is essential that the degree plans are correct.

Mr. Land asked division directors to look at these issues within their departments. He stated that this topic will be readdressed at later committee meetings.

Mr. Land discussed scheduling a regular committee meeting. He stated that he would send more information about scheduling.

With no further business to discuss, the meeting was adjourned at 2:20 p.m.

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Respectfully submitted by Olivia Dodd (secretary)

**NACC Curriculum Committee--AGENDA**  
**June 30, 2016**  
**1:00 pm**

**I. Old Business:**

Curriculum Committee Minutes May 17, 2016

**Meeting:** The Curriculum Committee held an online meeting on Tuesday, May 17, 2016.

**Participating:** *Dr. Joe Burke, Haley Johnson, Jane Hopson, Dr. Mike Kennamer, Rodney Land, Greg Millican, Dean Sherie Grace, Joan Reeves, Rob Woodall, Sherry Whitten, Jody Ragsdale, Brad Fricks*

**Not Participating:** Angie Stewart, Dr. Julia Everett, Shelia Barnes

Chair Rodney Land convened the online meeting. He asked the committee to review an *Application for Addition to the Curriculum* for ILT 235. He asked the committee to respond with a vote of yes or no to approve or disapprove the course for the summer term.

All participating members voted to approve the *Application for Addition to the Curriculum* for ILT 235.

Respectfully submitted by Olivia Dodd (secretary)

II. Degree plan changes—OAD.....Haley Johnson

III. Applications for Additions to the Curriculum:

A. RDG-084.....Joan Reeves

B. ACR Programs .....Dr. Mike Kennamer  
Heating, Ventilating, Air Conditioning & Refrigeration (HVAC-R)

**New programs to add to curriculum/catalog**

- o Short Term Certificate
- o Certificate
- o Associate in Applied Science

New courses to add to curriculum/catalog (**Bold indicates required courses.**)

<b>ACR 111</b>	<b>ACR 112</b>
<b>ACR 113</b>	ACR 119
ACR 120	<b>ACR 121</b>
<b>ACR 122</b>	<b>ACR 123</b>
ACR 125	ACR 126
ACR 127	ACR 128
ACR 132	ACR 133
ACR 134	ACR 135
<b>ACR 144 (no POI)</b>	ACR 147
ACR 148	ACR 149
ACR 152	<b>ACR 192 (no POI)</b>
ACR 203	ACR 205
ACR 209	ACR 210

Additional courses in ACR course directory pending submission of syllabus. Do not add to catalog or curriculum at this time.

ACR 130	ACR 138
ACR 141	ACR 150
ACR 151	ACR 181
ACR 182	ACR 183
ACR 184	ACR 185
ACR 186	ACR 187
ACR 200	ACR 202
ACR 212	ACR 214

IV. Applications to Employ Distance Education Technology in an Instructional Program:

V. Report from Syllabus & Curriculum Review Sub-Committee.....Dr. Julia Everett

VI. Questions/Comments regarding Programs of Study,  
Transfer Guides, Degree Plans, etc. ....Dean Sherie Grace

VII. Other Business:

VIII. Future meeting times & closing comments.....Rodney Land

## SYLLABUS

**RDG 084**  
**3 Semester Hours**

**Developmental Reading II**  
**3 Contact Hours**

### **I. Course Description**

This course is designed to assist students whose placement test scores indicate serious difficulty with decoding skills, comprehension, vocabulary, and study skills. Students scoring below 70 (Accuplacer) on the reading subtest must take this course within the first two semesters of enrollment as a co-requisite to college-level courses. To complete RDG 084, students must finish the course with a minimum grade of “C” or 70%.

### **II. Prerequisite**

- A. Accuplacer test score of 70 or better; OR
- B. A score of 20 or better on the ACT or SAT Evidence Based Reading and Writing Score of 510 or better or SAT Writing and Language score of 26 or better.

### **III. Course Textbook, Manuals, or Other Required Materials**

McWhorter, Kathleen T. *Essential Reading Skills*, 4th ed., New York: Longman, 2011.

### **IV. Course Learning Outcomes**

- A. The student will develop the ability to recognize focused structure in reading material having logical and coherent generalizations and concrete details
- B. The student will develop and use basic word attack skills
- C. The student will develop and use strategies for improving recognition vocabulary
- D. The student will develop analytical and critical reading skills as tools for the demands of college textbooks

### **V. Course Outline of Topics**

- A. Reading Actively
- B. Building Vocabulary
- C. Locating Main Ideas and Supporting Details
- D. Recognizing Basic Patterns of Organization
- E. Reading and Thinking Critically

### **VI. Methods of Instruction**

- A. Lecture/ class discussion
- B. Individual instruction
- C. Supervised practice

## **VII. Evaluation and Assessment**

### Course Grade Assessment

- A. Pre-assessment consisting of tests for reading speed, reading comprehension and recognition vocabulary.
- B. Students are required to take the diagnostic test supplied by My Reading Lab and complete all exercises assigned based on that score.
- C. Tests will assess the student's comprehension, recognition vocabulary, ability to organize information, retention, perception of facts, assumptions, opinions, and main idea.
- D. Final reading proficiency examination which requires the student to retake Accuplacer and make a minimum score of 70. This score will count 20% of the final grade.
- E. A grade of "C" or better (This grade is required for passing RDG 084)
- F. Grades will be given based upon A=90-100%, B=80-89%, C=70-79%, D=60-69, F=below 60%

## **VIII. Attendance**

Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid.

## **IX. Statement on Discrimination/Harassment**

Northeast Alabama Community College and the Alabama State Board of Education are committed to providing both employment and educational environments free of harassment or discrimination related to an individual's race, color, gender, religion, national origin, age or disability. Such harassment is a violation of State Board of Education policy. Any practice or behavior that constitutes harassment or discrimination will not be tolerated.

## **X. Statement of Adherence to ADA Guidelines**

Instructors will adhere to the Americans with Disabilities Act and/or Section 504 of the Rehabilitation Act (1973) and will publish the following statement on course outlines given to students at the beginning of the semester: "Any individual who qualifies for reasonable accommodations under the Americans with Disabilities Act or Section 504 of the Rehabilitation Act (1973) should notify the instructor immediately."





# Northeast Alabama Community College

## Application for Additions to the Curriculum

- Directions:
- (1) Save this form to your computer as a Word document (.doc extension).
  - (2) Submit the completed form via e-mail to your division director, with a copy e-mailed to the Office of Institutional Planning and Assessment ([mannl@nacc.edu](mailto:mannl@nacc.edu)).
  - (3) Submit a signed print copy to your division director.
  - (4) Attach a copy of the course syllabus.

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
RDG    084
  
2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?  
To ensure that students are provided all the necessary resources for college completion, this course is offered for those whose basic reading skills need additional support.
  
3. Give justification for offering this course at Northeast Alabama Community College.  
Students who struggle in reading face additional obstacles in college completion. This course is provided for those students whose ACT or placement scores indicate a deficiency in reading comprehension.
  
4. Is this a transfer course?  
No  
  
If so, what is the AGSC Transfer Code Designation (A, B, or C)?  
NA
  
5. Into what degree or certificate program(s) will this course fit?  
NA
  
6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?  
NA
  
7. Is this course listed in the Alabama College System Course Directory?  
Yes If so, please attach a copy of the ACS directory listing.

DPT.	CRS.	COURSE TITLE	"THEORY"		"EXPERIMENTAL"		"MANIPULATIVE"		COURSE CREDIT HOURS
			CREDIT HOURS	WEEKLY CONTACT HOURS	CREDIT HOURS	WEEKLY CONTACT HOURS	CREDIT HOURS	WEEKLY CONTACT HOURS	
RDG	084	DEVELOPMENTAL READING II	1-4	1-4	0	0	0	0	1-4

8. Provide the course description.  
  
PREREQUISITE: RDG 083 or equivalent placement score.  
  
This course is designed to assist students whose placement test scores indicate serious difficulty with decoding skills, comprehension, vocabulary, and study skills.

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and

track number of the previous course.

No

Submitted by

Endorsed by

Approved by

\*Approved by

SIGNATURES ON FILE.

\*Final approval of any course rests with the Vice President/Dean of Instruction.

	<b>Last Revision: Fall 2016-2017</b>
<b>SYLLABUS</b>	
<b>ENG 101</b>	<b>English Composition I</b>
<b>3 Semester Credit Hours – A</b>	<b>3 Contact Hours</b>

**I. Course Description**

English Composition I provides instruction and practice in the writing of at least six (6) extended compositions and the development of analytical and critical reading skills and basic reference and documentation skills in the composition process. English Composition I may include instruction and practice in library usage. CORE

**II. Prerequisite**

- A. Successful completion of ENG 093; OR
- B. A score of 5 and above on Accuplacer Write Placer or a score of 4 on Accuplacer Write Placer with the co-requisite English 080 one-hour lab course; OR
- C. A score of 18 or better on the ACT or SAT Evidence Based Reading and Writing score of 510 or better or SAT Writing and Language score of 25 or better.

**III. Course Textbook, Manuals, or Other Required Materials**

Harris, Muriel and Jennifer L. Kunka. *Prentice Hall Reference Guide*. Boston: Pearson, 2015.

**IV. Course Learning Outcomes**

- A. The student will develop and use strategies for writing essays from development of the subject through revision of the essay;
- B. The student will develop and use focused structure, incorporating logical and coherent generalizations and details on a variety of subjects;
- C. The student will develop basic reference and APA documentation skills with emphasis on the difference between quotes and paraphrases;
- D. The student will develop analytical and critical reading skills as a tool for use in composition.

**V. Outline of Course Topics**

- A. The writing process—prewriting, composing, revising, and editing
- B. Focus on the finished product—content, organization, and style
- C. Writing for various purposes—narration, comparison/contrast, process analysis, classification, argumentation, and literary analysis

- D. Writing from research—APA documentation style
- E. Review of grammar and usage rules as determined by diagnostic exams and/or student writing.

## **VI. Methods of Instruction**

- A. Each student must write at least six (6) extended compositions or equivalent assignments. The student must demonstrate writing ability and understanding of different methods of organization, by following a prescribed method of development. At least one essay should come from each of the traditional forms: narration, comparison/contrast, process analysis, classification, and argumentation. At least one essay should require library research and APA documentation. These essays should be prepared from acceptable outlines and will be evaluated on the basis of clarity, unity, specificity, adherence to type of organization specified for a particular assignment, and interest. Additionally, the student must demonstrate at least minimum accepted levels of correctness in grammar, usage, and sentence structure.
- B. Revision and correction of essays as returned by the instructor.
- C. Analysis of errors in sentences and paragraphs abstracted from students' papers and other sources.
- D. Lecture and discussion on material presented in the text.
- E. Peer group reviewing/editing.
- F. Study of vocabulary/dictionary as an aid to composition.
- G. Use of materials from the Learning Resource Center, both as a class and for individual needs.

## **VII. Evaluation and Assessment**

### Course Grade Assessment

- A. At least 80% of the final grade must be earned on written essays.
  - 1. At least one of the six required essays will require library research, incorporating the use of technological applications and using APA documentation.
  - 2. One of the six essays will be an impromptu essay written during the last two weeks of the semester and will count 20% of the final grade. The topics for this essay will be assigned by the division director and will require the student to use one of the following strategies: narration, comparison/contrast, process analysis, classification, or argumentation. This essay will be panel graded by the Northeast English faculty. Each paper will be read twice and holistically ranked on a scale of 1-5, using the department rubric. The two scores will be averaged unless there is a discrepancy of more than one point in the two scores. If there is a discrepancy of more than one point, the paper will be read a third time, and that score will stand.
- B. The remaining 20% of the final grade will be earned from grammar/usage exercises and examinations. One of these examinations should be given at the scheduled time for the final exam and should be a post-diagnostic grammar/usage exam.
- C. A grade of "C" or better is required for passing into English 102 or for transfer of credit.

- D. Grades will be given based upon A=90-100%, B=80-89%, C=70-79%, D=60-69%, and F=below 60%.

### **VIII. Attendance**

Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid.

### **IX. Statement on Discrimination/Harassment**

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### **X. Statement of Adherence to ADA Guidelines**

Instructors will adhere to the *Americans With Disabilities Act* and/or *Section 504* of the *Rehabilitation Act* (1973) and will publish the following statement on course outlines given to students at the beginning of each semester: "Any individual who qualifies for reasonable accommodations under the *Americans With Disabilities Act* or *Section 504* of the *Rehabilitation Act* (1973) should notify the instructor immediately."

### **XI. Plagiarism Policy**

Plagiarism is the intentional copying of the ideas or words of another and using those ideas or words as one's own. Instructors may use anti-plagiarism programs to check student work. When outside sources are paraphrased or incorporated verbatim, they must be acknowledged. Students who submit plagiarized or partially plagiarized assignments will not receive credit for those assignments and may be subject to failure in the course.

*Northeast Alabama Community College*  
*Evaluation of General Education and Program Learning Outcomes*  
*Program Learning Outcomes Form*

**ENG 101 (English Composition I)**

Faculty annually review the extent to which the general education and program learning outcomes identified in a course syllabus are being attained by students who complete the course. Each syllabus identifies the assessment method that will be used to demonstrate student mastery of the desired general education and program learning outcomes. Before teaching a course, faculty should review the syllabus to understand how the learning outcomes will be evaluated. Once the course is complete, this form is used by the instructor to report how well students demonstrated mastery of those general education and program learning outcomes.

Course Prefix & No.: <b>ENG 101</b>	Course Title: <b>English Composition I</b>
Instructor:	Date:
Semester:	Section Number(s):
Type of Delivery – Mark One*: <input type="checkbox"/> Dual Enrollment <input type="checkbox"/> Online <input type="checkbox"/> Traditional	
*Double click on the appropriate box. When the form field menu appears, select "checked" under Default value.	

<b>General Education/Program Learning Outcome</b>	<b>Institutional Evaluation Method and Benchmark</b>	<b>Evaluation Results</b> Of the students who completed the assessment, how many demonstrated attainment of the stated outcomes? (For example, 22/28, 19/28)	<b>Suggested Improvements</b> Based on an analysis of the evaluation results, what improvements can be made in the program? You must include something specific in this section, even if all of the students demonstrated attainment of the outcomes.
<b>Written Communication—</b> Students will demonstrate adequate writing skills by developing ideas and organizing contents effectively.	The assessment of student proficiency in written communication will be evaluated by an impromptu essay on the final exam. The essay will be scored by rubric. Students achieving the outcome will score a minimum of 75% on the essay.		

\*Reviewed by:  
Division Director or Program Supervisor

Date:

\*To be completed by Division Director or Program Supervisor Only

PLO FORM

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Revised 03/01/2015.

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# Northeast Alabama Community College

## Application for the Addition of a Program to the Curriculum

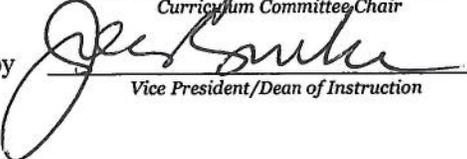
- Directions:
- (1) Save this form to your computer as a Word document (.doc extension).
  - (2) Submit a signed copy of the completed form to the chair of the Curriculum Committee.
  - (3) Attach a copy of the list of state-approved courses within this program along with their course descriptions.\*
  - (4) Attach the program approval letter from the Department of Postsecondary Education.

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Program name and CIP code  
Heating, Ventilating, Air Conditioning and Refrigeration (HVACR, or ACR)  
CIP: 47.0201
2. How does this program help achieve or enhance the Northeast Alabama Community College Mission, and what is the justification for offering this program at Northeast?
  - Provision of accessible quality educational opportunities (Mission)
  - Available, accessible and affordable courses that provide quality instruction in career and technical programs that lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. (Goal 3)

Submitted by  Date 6/30/16  
Division Chair or Director of Workforce Development

Approved by  Date 6/30/16  
Curriculum Committee Chair

† Approved by  Date 6-30-16  
Vice President/Dean of Instruction

\* NOTE: This approval includes the program and all courses within the program listed in the Alabama Community College System Course Directory as of the date of approval. The above-named petitioner is responsible for submitting a syllabus to the Curriculum Committee prior to the initial delivery of each course. Courses added to the ACCS Course Directory at a later date must be submitted to the Committee for approval on an individual basis.

† Final approval of any program rests with the Vice President/Dean of Instruction.

Curriculum Committee.

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Revised 04/22/08.

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Post Office Box 302130  
Montgomery, AL 36130-2130



T 334.293.4500 F 334.293.4504  
www.accs.cc

MARK A. HEINRICH, PH.D.  
Chancellor

June 9, 2016

Dr. David Campbell, President  
Northeast Alabama Community College  
P.O. Box 159  
Rainsville, Alabama 35986-0159

Dear President Campbell:

On June 8, 2016, the Alabama Community College System Board of Trustees formally approved Northeast Alabama Community College's application for an Associate in Applied Science Degree and Certificate Award in Air Conditioning/Refrigeration. Attached is a copy of the approved Action Item VII.A.2. detailing your request.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark A. Heinrich'.

Mark A. Heinrich, Ph.D.  
Chancellor

tj

Attachment



## Alabama Commission on Higher Education

Mailing Address: P.O. Box 302000 □ Montgomery, Alabama 36130-2000  
Delivery Address: 100 North Union Street □ Montgomery, Alabama 36104-3758  
Telephone: (334) 242-1998 □ 1-800-960-7773 □ Fax (334) 242-0268  
www.ache.alabama.gov



June 13, 2016

Mark A. Heinrich  
Chancellor  
Alabama Community College System  
135 South Union Street  
Montgomery, AL 36104

Dear Chancellor Heinrich:

At its meeting on June 10, 2016, The Alabama Commission on Higher Education approved several decision items and accepted a number of information items regarding Community Colleges.

### DECISION ITEMS:

The Alabama Commission on Higher Education approved the following decision items for the following Community Colleges:

#### ACADEMIC PROGRAM

- Northeast Alabama Community College, Associate in Applied Science and Certificate in Air Conditioning and Refrigeration (CIP 47.0201) [Decision item B10]

The program was approved with post-implementation conditions and the requirement of a post-implementation report.

#### EXTENSIONS-ALTERATIONS

- Calhoun Community College, Addition of an Option in Industrial Energy Specialist to the Existing AAS in Advanced Manufacturing Technology (CIP 15.0613) [Decision item C5]

Please note that, in accordance with Commission operating definitions, concentrations/options in academic programs are not identified separately in the Commission's Academic Program Inventory, and the institution may not identify them as degree programs.

#### REQUEST TO AMEND POST-IMPLEMENTATION CONDITIONS

Drake State Community and Technical College, Associate in Applied Technology and Certificate in Medical Assisting Technology (CIP 51.0801) [Decision item E1]

RECEIVED

Chancellor's  
Office

**INFORMATION ITEMS:**

- Shelton State Community College, New Exempt Off-Campus Site - Tuscaloosa Career and Technology Academy, Tuscaloosa, Alabama *[Information item 7]*
- Northeast Alabama Community College, New Exempt Off-Campus Site - Fort Payne High School, Fort Payne, Alabama *[Information item 8]*
- Snead State Community College, New Exempt Off-Campus Site Marshall Technical School, Guntersville, Alabama - *[Information item 9]*
  
- Implementation of Approved Programs *[Information item 11]*
  - Faulkner State Community College Program: Associate in Applied Science in Animation, Interactive Technology, Video Graphics & Visual Effects, AAS, (CIP 10.0304).
- Summary of Post-Implementation Reports *[Information item 12]*
  - Lurleen B. Wallace Community College, Program: Associate in Applied Science in Diagnostic Medical Sonography (CIP 51.0910)
  - Southern Union State Community College, Program: Associate in Applied Science and Certificate in Surgical Technology (CIP 51.0909)
  - Snead State Community College, Associate in Applied Science and Certificate in Child Development (CIP 19.0708)
  - Drake State Community and Technical College, Associate in Applied Technology and Certificate in Medical Assisting Technology (CIP 51.0801) *[A request for an additional post implementation review period is on the agenda as a decision item]*

The following new short certificate programs (less than 30 semester hours) information items related to two-year institutions were accepted by the Commission: *[Information Item 13]*

**Bishop State Community College**  
Welding w/emphasis, CIP 48.0508

**Calhoun Community College**  
Advanced Manufacturing w/emphasis, CIP 15.0613  
Computer Information Systems w/emphasis, CIP 11.0101

**Gadsden State Community College**  
Computer Science, CIP 11.0101

**Ingram State Technical College**  
Cosmetology w/emphasis, CIP 12.0401

**Jefferson State Community College**  
Medical Laboratory Technology w/emphasis, CIP 51.1004

**Northeast Alabama Community College**  
Heating, Ventilation, AC & Refrigeration, CIP 47.0201

**Trenholm State Community College**  
Child Development, CIP 19.0708

**Wallace State Community College (Hanceville)**  
Heating, Ventilation, AC & Refrigeration w/emphasis, CIP 15.0501

Chancellor Heinrich  
June 13, 2016  
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- Changes to the Academic Program Inventory *[Information Item 14]*
  - Changes in CIP Codes, Program Titles, or Degree Nomenclature
    - Chattahoochee Valley Community College, ~~CIP-15.0613~~ to CIP 15.0612  
Manufacturing Technology, AAS, C College

The items referenced in this letter are available on the Commission website at the following address: <http://www.ache.alabama.gov/Content/Commission%20Meetings/Agenda.pdf>

We look forward to working with you and your staff on other matters related to Alabama higher education in the future.

Sincerely,



Gregory G. Fitch, Ph.D.  
Executive Director

c: Special Assistant Susan Price  
Ms. Trish Jones  
Dr. Lenny Lock



# Alabama Community College System

## COURSE DESCRIPTIONS: CAREER/TECHNICAL DISCIPLINES

### AIR CONDITIONING/REFRIGERATION TECH (ACR)

CIP Code 15.0501

**Title:** Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician.

**Definition:** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using air conditioning, refrigeration, ventilation, and heating systems. Includes instruction in principles of heating and cooling technology, design and operational testing, inspection and maintenance procedures, installation and operation procedures, and report preparation.

7/6/15

SUMMARY OF CHANGES			
DATE	COURSE NUMBER	COURSE TITLE	RECENT CHANGES
7/6/15	212	HVAC Workbased Learning	Course added at the request of Shelton State
7/6/15	214	HVAC Workbased Learning	Course added at the request of Shelton State
10/8/14	150	Basic Sheet Metal Processes	Course reinstated at the request of Wallace Dothan
7/29/14	139	Automotive Air Conditioning	Archived this course due to inactivity
7/29/14	150	Basic Sheet Metal Processes	Archived this course due to inactivity
5/29/13	139	Automotive Air conditioning	Course description was incorrect. Updated to reflect description from POI.
10-23-09	125	Fundamentals of Gas and Electrical Heating Systems.	Course added. This course is a combination of 119 and 120. It is a suitable substitute both those courses are taken.
<b>Comments:</b> Archived courses may be reinstated when needed.			



# **Alabama Community College System**

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	111	PRINCIPLES OF REFRIGERATION	1	2	3
Course Description				Updated	2/6/05
PREREQUISITES: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course emphasizes the fundamental principles for air conditioning and refrigeration. Instruction is provided in the theory and principles of refrigeration and heat transfer, HVAC/R system components, common, and specialty tools for HVAC/R, and application of the concepts of basic compression refrigeration. Upon completion, students should identify system components and understand their functions, identify and use common and specialty HVAC/R tools, and maintain components of a basic compression refrigeration system. This is a <b>CORE</b> course.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	112	HVACR SERVICE PROCEDURES	1	2	3
Course Description				Updated	3/9/06
PREREQUISITE: As determined by college					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course covers system performance checks and refrigerant cycle diagnosis. Emphasis is placed on the use of refrigerant recovery/recycle units, industry codes, refrigerant coils and correct methods of charging and recovering refrigerants. Upon completion, students should be able to properly recover/recycle refrigerants and demonstrate safe, correct service procedures which comply with the no-venting laws.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	113	REFRIGERATION PIPING PRACTICES	1	2	3
Course Description				Updated	2/6/05
PREREQUISITES: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
The course introduces students to the proper installation procedures of refrigerant piping and tubing for the heating, ventilation, air conditioning and refrigeration industry. This course includes various methods of working with and joining tubing. Upon completion, students should comprehend related terminology, and be able to fabricate pipe, tubing, and pipe fittings. <b>CORE</b>					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	119	FUNDAMENTALS OF GAS HEATING SYSTEMS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITES: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides instruction on general service and installation for common gas furnace system components. Upon completion, students will be able to install and service gas furnaces in a wide range of applications.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	120	FUNDAMENTALS OF ELECTRIC HEATING SYSTEMS	1	2	3
Course Description				Updated	3/9/06
PREREQUISITES: As determined by college					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course covers the fundamentals of electric furnace systems. Emphasis is placed on components, general service procedures, and basic installation. Upon completion, students should be able to install and service electric furnaces, heat pumps, and solar and hydronics systems.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	121	PRINCIPLES OF ELECTRICITY FOR HVACR	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course is designed to provide the student with the basic knowledge of electrical theory and circuitry as it pertains to air conditioning and refrigeration. This course emphasizes safety, definitions, symbols, laws, circuits, and electrical test instruments. Upon completion students should understand and be able to apply the basic principles of HVACR circuits and circuit components. This is a <b>CORE</b> course.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	122	HVACR ELECTRIC CIRCUITS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course introduces the student to electrical circuits and diagrams. Electrical symbols and basic wiring diagrams are constructed in this course. Upon completion, student should understand standard wiring diagrams and symbols and be able to construct various types of electrical circuits. This is a <b>CORE</b> course.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	123	HVAC/R ELECTRICAL COMPONENTS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course introduces students to electrical components and controls. Emphasis is placed of the operations on motors, relays, contactors, starters, and other HVAC electrical components. Upon completion, students should be able to install electrical components and determine their proper operation. This is a <b>CORE</b> course.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	125	FUNDAMENTALS OF GAS AND ELECTRICAL HEATING SYSTEMS	2	4	6
Course Description				Added	10/23/09
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides instruction on general service and installation for common gas and electrical heating systems. Emphasis is placed on components, general service procedures, and basic installation. Upon completion, students will be able to install and service gas and electrical heating systems in a wide range of applications. <b>NOTE:</b> This course is a suitable substitution for ACR 119 and 120 if those both courses are taken.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	126	COMMERCIAL HEATING SYSTEMS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course covers the theory and application of larger heating systems. Emphasis is placed on larger heating systems associated with commercial applications such as gas heaters, boilers, unit heaters, and duct heaters. Upon completion, student should be able to troubleshoot and perform general maintenance on commercial heating systems.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	127	HVACR ELECTRIC MOTORS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course covers the basic maintenance of electric motors used in HVAC/R systems. Topics include types of motors, motor operations, motor installation, and troubleshooting motors. Upon completion student should be able to install and service HVAC/R electric motors.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	128	HEAT LOAD CALCULATIONS	3	0	3
Course Description				Updated	3/9/06
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course focuses on heat flow into and out of building structures. Emphasis is placed on determining heat gain/heat loss of a given structure. Upon completion, students should be able to calculate heat load and determine HVAC equipment size requirements.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	130	COMPUTER ASSISTED HVAC TROUBLESHOOTING	0	1	1
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course focuses on troubleshooting procedures. Emphasis is placed on the proper use of test equipment and machine/electrical malfunctions. Upon completion, student should be able to diagnosis and repair service problems in HVAC equipment.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ASC/ACR	132	RESIDENTIAL AIR CONDITIONING	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course introduces students to residential air conditioning systems. Emphasis is placed on the operation, service, and repair of residential air conditioning systems. Upon completion, students will be able to service and repair residential air conditioning systems.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	133	DOMESTIC REFRIGERATION	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course covers domestic refrigerators and freezers. Emphasis is placed on installation, removal, and maintenance of components. Upon completion, students should be able to service and adjust domestic refrigeration units.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	134	ICE MACHINES	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course introduces students to commercial ice machines. Emphasis is placed on components, electrical and mechanical operation sequences, control adjustment procedures, preventive maintenance, repairs, and installation procedures. Upon completion, student should be able to install, service and repair commercial ice machines.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	135	MECHANICAL/GAS/SAFETY CODES	3	0	3
Course Description				Updated	4/30/09
PREREQUISITE: As required by college.					
This course is to enhance the student's knowledge of the International Fuel Gas Code and International Mechanical Code as well as fire and job safety requirements. Emphasis is placed on code book content and compliance with installation requirements. Upon completion, students should be able to apply code requirements to all work.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	138	CUSTOMER RELATION IN HVAC	3	0	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course covers the basic aspects of customer relations needed by the HVAC technician. Topics include employability skills associated with job performance, record keeping, service invoices, certification requirements, local ordinances, and business ethics. Upon completion, students should be able to get a job and keep it.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	141	ENVIRONMENTAL SYSTEMS	2	2	4
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides students with knowledge and skills of environmental chambers. Topics include theory of the refrigerant components and refrigerant circuits, programmable controllers, electrical pressure and calibration instruments and places emphasis on safety. Upon course completion, students should be able to apply environmentally-safe practices.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	144	BASIC DRAWING AND BLUEPRINT READING IN HVAC	3	0	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course covers basic drawing and blueprint reading as applied to the HVAC industry. Emphasis is on three-view drawings, basic duct systems, and isometric piping. Upon course completion, students should be able to perform basic drawings related to HVAC systems and read pertinent blueprints.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	147	REFRIGERANT TRANSITION AND RECOVERY THEORY	3	0	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course is EPA-approved and covers material relating to the requirements necessary for type I, II, and III universal certification. Upon completion, students should be prepared to take the EPA 608 certification examination.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	148	HEAT PUMP SYSTEMS I	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
Instruction received in this course centers around the basic theory and application of heat pump systems and components. Upon completion students will be able to install and service heat pumps in a wide variety of applications.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	149	HEAT PUMP SYSTEMS II	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This is a continuation course of the basic theory and application of heat pump systems. Topics include the electrical components of heat pumps and their function. Upon completion student should be able to install and service heat pumps.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	150	BASIC SHEET METAL PROCESSES	2	4	6
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides instruction in sheet metal hand processes. Topics include the use of bench tools and hand brake, with an emphasis on bending, shearing and notching. This course also includes the principles of layout and design.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	151	DUCT DESIGN AND FABRICATION	2	4	6
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides instruction related to blueprints, layouts, and design ducts. Topics include all aspects of fabrication including straight duct, offsets and various other fittings needed to perform a certain task.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	152	HEAT PUMP SYSTEMS	2	4	6
Course Description				Added	3/9/06
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides instruction on the operation and servicing of heat pump systems. Emphasis is placed on theory and application of refrigerants for heat pump systems and on basic service of components. Students should possess a strong foundation of electrical principles and theory. Upon completion students will be able to install and service heat pumps. <b>NOTE: Information in this course is identical to ACR 148 and 149 and can be an alternative to those courses.</b>					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	181	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION I	3	0	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides specialized instruction in various areas related to the air conditioning and refrigeration industry.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	182	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION II	0	3	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides students with opportunities to experience hands-on application of specialized instruction in various areas related to the air conditioning and refrigeration industry.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	183	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION	1	0	1
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides students with opportunities to experience hands-on application of					

specialized instruction in various areas related to the air conditioning and refrigeration industry.

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	184	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION	0	1	1
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides students with opportunities to experience hands-on application of specialized instruction in various areas related to the air conditioning and refrigeration industry.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	185	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION	2	0	2
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides students with opportunities to experience hands-on application of specialized instruction in various areas related to the air conditioning and refrigeration industry.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	186	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION	0	2	2
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course provides students with opportunities to experience hands-on application of specialized instruction in various areas related to the air conditioning and refrigeration industry.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	187	SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION	3	2	5
Course Description				Added	8/10/05
PREREQUISITE: As required by college.					
This course provides students with opportunities to experience hands-on application of specialized instruction in various areas related to the air conditioning and refrigeration industry.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	192	HVAC APPRENTICESHIP/INTERNSHIP	0	3	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course is designed to provide basic hands-on experiences in the work place. The student is provided with a training plan developed by the employer and instructor working together to guide the learning experience. Upon course completion, students should be able to work independently and apply related skills and knowledge. This course involves a minimum of 15 work hours weekly.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	200	REVIEW FOR CONTRACTORS EXAM	3	0	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by collage.					
This course prepares students to take the State Certification Examination. Emphasis is placed on all pertinent codes, piping procedures, duct design, load calculation, psychometrics, installation procedures, and air distribution. Upon completion, students should be prepared to take the contractors exam.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	202	SPECIAL REFRIGERATION SYSTEMS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
This course is designed to give the students the basic knowledge of a variety of commercial refrigeration systems. Topics include expandable refrigeration evaporator systems, combination spray and compressor system, open cycle ammonia, CO2 pellets, vortex tubes, reach in coolers, and soft serve ice cream machines. Upon completion, students should be able to perform general troubleshooting and maintenance on various commercial refrigeration systems.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	203	COMMERCIAL REFRIGERATION	1	2	3
Course Description				Updated	4/18/06
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course focuses on commercial refrigeration systems. Emphasis is placed on evaporators, condensers, compressors, expansion devices, special refrigeration components and application of refrigeration systems. Upon completion students should be able to service and repair commercial refrigeration systems.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	205	SYSTEM SIZING AND AIR DISTRIBUTION	1	2	3
Course Description				Updated	4/18/06
PREREQUISITE: As required by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides instruction in the load calculation of a structure and system sizing. Topics of instruction include heat loss, heat gain, equipment and air distribution sizing, and factors making acceptable indoor air quality. Upon course completion, students should be able to calculate system requirements.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ASC/ACR	209	COMMERCIAL AIR CONDITIONING SYSTEMS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course focuses on servicing and maintaining commercial and residential HVAC/R systems. Topics include system component installation and removal and service techniques. Upon completion, the student should be able to troubleshoot and perform general maintenance on commercial and residential HVAC/R systems.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	210	TROUBLESHOOTING HVACR SYSTEMS	1	2	3
Course Description				Updated	2/6/05
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides instruction in the use of various meters and gauges used in the HVACR industry. Emphasis is placed on general service procedures, system diagnosis, and corrective measure, methods of leak detection, and system evacuation, charging and performance checks. Upon completion students should be able to perform basic troubleshooting of HVAC/R.					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	212	HVAC WORKBASED LEARNING	0	3	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course is designed to provide hands-on experiences with HVAC processes in the work place. Students are provided with a training plan developed by the employer and instructor working together to guide the learning experience. Upon course completion, students should be able to work independently and apply related skills and knowledge. Note: Students must possess a current <i>EPA Section 608 Certification</i> .					

DPT	CRS	COURSE TITLE	THEORY	LAB	COURSE
ACR	214	HVAC WORKBASED LEARNING	0	3	3
Course Description				Updated	2/6/05
PREREQUISITE: As required by college.					
This course is designed to provide hands-on experiences HVAC processes in the work place. Students are provided with a training plan developed by the employer and instructor working together to guide the learning experience. Upon course completion, students should be able to work independently and apply related skills and knowledge. This course involves a minimum of 15 work hours weekly. Note: Students must possess a current <i>EPA Section 608 Certification</i> .					





**Short Term Certificate  
Heating, Ventilation, Air Conditioning and Refrigeration**

*Area V*

Technical Core

All students must complete.

ACR 111	Principles of Refrigeration	3
ACR 112	HVACR Service Procedures	3
ACR 113	Refrigeration Piping Practices	3
ACR 121	Principles of Electricity for HVACR	3
ACR 122	HVACR Electric Circuits	3
ACR 123	HVACR Electrical Components	3
ACR 144	Basic Drawing & Blueprint Reading in HVAC	3
WKO 110	NCCER Core	3

**TOTAL HOURS REQUIRED FOR SHORT TERM CERTIFICATE 24**

**Northeast Alabama Community College  
Air Conditioning & Refrigeration**

**Career Pathway Guide**

	Course #	Course Name	Sem. Hours
Semester 1	ACR 111	Principles of Refrigeration	3
	ACR 112	HVACR Service Procedures	3
	ACR 113	Refrigeration Piping Practices	3
	WKO 110	NCCER Core	3
	ENG 101	English Composition I	3
	Credential	<b>NCCER Core</b>	
	Credential	<b>EPA 608 Certification Exam</b>	
	Credential	<b>HVAC Excellence Air Conditioning Exam</b>	
Semester 2	ACR 121	Principles of Electricity for HVACR	3
	ACR 122	HVACR Electric Circuits	3
	ACR 123	HVACR Electrical Components	3
	ACR 144	Basic Drawing & Blueprint Reading	3
	MTH 116	Mathematical Applications	3
	Credential	<b>Eligible for Short Term Certificate in Air Conditioning &amp; Refrigeration</b>	
	Credential	<b>HVAC Excellence Electrical Exam</b>	
	Credential	<b>NCCER Level I</b>	
Semester 3	ACR	Elective	3
	ACR	Elective	3
	CIS 146	Microcomputer Applications	3
	SPH 107	Fundamentals of Public Speaking	3
	Credential	<b>NOCTI HVAC Service and Repair</b>	
Semester 4	ACR	Elective	3
	ACR	Elective	3
	Area IV	Area IV Elective	3
	WKO 106	Workplace Skills	3
	Credential	<b>Eligible for Certificate in Air Conditioning &amp; Refrigeration</b>	
	Credential	<b>HVAC Excellence Exams as applicable</b>	
Semester 5	ACR 192	HVAC Apprenticeship/Internship	3
	Area II	Humanities & Fine Arts Elective	3
	Area III	Math, Science or CIS Elective	3
	ACR	Elective	3
	Credential	<b>Eligible for Associate in Applied Science (AAS) in Air Conditioning &amp; Refrigeration</b>	
	Credential	<b>NCCER Level II</b>	
	Credential	<b>NOCTI HVACR Installation and Set Up</b>	



Northeast Alabama Community College

### Application for Additions to the Curriculum

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
 MTT 134    Lathe Operations I

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in Lathe Operations.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	134	LATHE OPERATIONS I	2	1	3
Course Description			Updated		Feb. 08
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course includes more advanced lathe practices such as set-up procedures, work planning, inner- and outer-diameter operations, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced lathe techniques. MTT 134/135 are suitable substitutes for MTT 129. This course is aligned with NIMS standards.					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT129, which is a 6 credit hour equivalent to both MTT34/135

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by

Approved by

\*Approved by

SIGNATURES ON FILE.

\*Final approval of any course rests with the Vice President/Dean of Instruction.



Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
 MTT 135    Lathe Operations I Lab

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in Lathe Operations.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	135	LATHE OPERATIONS I LAB	0	3	3
Course Description				Updated	Feb. 08
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course includes more advanced lathe practices such as set-up procedures, work planning, inner- and outer-diameter operations, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced lathe techniques. MTT 134/135 are suitable substitutes for MTT 129. This course is aligned with NIMS standards.					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.

Currently, We teach MTT129, which is a 6 credit hour equivalent to both MTT34/135

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by  
Approved by  
\*Approved by

SIGNATURES ON FILE.

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Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
     MTT 147    Introduction to Machine Shop

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in manual machining.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	147	INTRODUCTION TO MACHINE SHOP I	2	1	3
Course Description			Updated		October 07
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is a <b>CORE</b> course. MTT 100 is a suitable substitute for MTT 147/148. This course is also taught at AUT 150.					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.

Currently, We teach MTT100, which is a 6 credit hour equivalent to both MTT147/148

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

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Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
 MTT 148    Introduction to Machine Shop I Lab

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in manual machining.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	148	INTRODUCTION TO MACHINE SHOP I LAB	0	3	3
Course Description				Updated	October 07
PREREQUISITE: As determined by college.					
COREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides practical application of the concepts and principles of machining operations learned in MTT 147. Topics include machine shop safety, measuring tools, lathes, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is a <b>CORE</b> course. MTT 100 is a suitable substitute for MTT 147/148. This course is aligned with NIMS certification standards.					
This course is also taught as AUT 151					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT100, which is a 6 credit hour equivalent to both MTT147/148

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by  
Approved by  
\*Approved by

SIGNATURES ON FILE.

\*Final approval of any course rests with the Vice President/Dean of Instruction.



Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
       MTT 149    Introduction to Machine Shop II

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in manual machining.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	149	INTRODUCTION TO MACHINE SHOP II	2	1	3
Course Description				Updated	October 07
PREREQUISITE: As determined by college.					
COREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides additional instruction and practice in the use of measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection of work holding devices, speeds, feeds, cutting tools and coolants. Upon completion, students should be able to perform intermediate level procedures of precision grinding, measuring, layout, drilling, sawing, turning, and milling. This is a <b>CORE</b> course and is aligned with NIMS certification standards. MTT 149/150 are suitable substitutes for MTT 103.					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT103, which is a 6 credit hour equivalent to both MTT149/150

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by

Approved by

\*Approved by

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Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
 MTT 150    Introduction to Machine Shop II Lab

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in manual machining.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	150	INTRODUCTION TO MACHINE SHOP II LAB	0	3	3
Course Description			Updated		October 07
PREREQUISITE: As determined by college.					
COREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides additional instruction and practice in the use of measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection of work holding devices, speeds, feeds, cutting tools and coolants. Upon completion, students should be able to perform intermediate level procedures of precision grinding, measuring, layout, drilling, sawing, turning, and milling. This is a <b>CORE</b> course and is aligned with NIMS certification standards. MTT 149/150 are suitable substitutes for MTT 103.					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT103, which is a 6 credit hour equivalent to both MTT149/150

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by  
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Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
     MTT 162    Precision Grinding

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in Grinding.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	162	PRECISION GRINDING	2	1	3
Course Description			Updated		November 07
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course includes more advanced precision grinder practices such as set-up procedures, work planning, surface grinding, cylindrical grinding, tool and cutter grinding, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced precision grinding techniques. This course is aligned with NIMS standards. MTT 146 is a suitable substitute for MTT 162 & MTT 163.					
This course is also taught as CNC 162.					

8. Provide the course description. (see directory listing #7 above)

9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT129, which is a 6 credit hour equivalent to both MTT34/135

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by

SIGNATURES ON FILE.

Approved by

\*Approved by

\*Final approval of any course rests with the Vice President/Dean of Instruction.



Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
 MTT 163    Precision Grinding Lab

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that provides an introductory level course in Grinding.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	163	PRECISION GRINDING LAB	0	3	3
Course Description			Updated		October 06
PREREQUISITE: As determined by college.					
<b>NOTE: There is an approved standardized plan-of-instruction for this course.</b>					
This course provides practical application of the concepts and principles of precision grinding learned in MTT 161. Topics include set-up procedures, work planning, surface grinding, cylindrical grinding, tool and cutter grinding, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced precision grinding techniques. This course is aligned with NIMS standards. MTT 146 is a suitable substitute for MTT 162 & MTT163.					
This course is also taught as CNC 163.					

8. Provide the course description. (see directory listing #7 above)
9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT129, which is a 6 credit hour equivalent to both MTT34/135

Submitted by     Hugo Deangelis     Date     6/20/2016      
*Instructor*

Endorsed by

Approved by

\*Approved by

SIGNATURES ON FILE.

\*Final approval of any course rests with the Vice President/Dean of Instruction.



Northeast Alabama Community College

**Application for Additions to the Curriculum**

Please note that the application must be approved by the Curriculum Committee before it is presented to the Vice President/Dean of Instruction for final approval.

1. Course prefix and number                      Course title  
     MTT 218    Computer Integrated Manufacturing

2. How does this course help achieve or enhance the Northeast Alabama Community College Mission?

The addition of this course supports NACC goals #3 & #7 by providing instruction which will lead to the attainment of specified learning outcomes, certificates, associate degrees, or institutional awards, and employment in the field of study. It will also deliver training specifically designed to meet the needs of local business, industry, community organizations, and governmental agencies.

3. Give justification for offering this course at Northeast Alabama Community College.

In addition to the promotion of NACC mission and goals, this course benefits the MTT program by providing a single course that covers the design and manufacturing process.

4. Is this a transfer course?

NO

If so, what is the AGSC Transfer Code Designation (A, B, or C)?

\_\_\_\_\_

5. Into what degree or certificate program(s) will this course fit?

Machine Tool Technology Short-Term Certificate, Certificate and Industrial Systems Technology-Machining Option Associate in Applied Science Degree.

6. Into what STARS area(s) will the course fit in a transfer program (Areas I-V)?

V

7. Is this course listed in the Alabama College System Course Directory?

YES If so, please attach a copy of the ACS directory listing.

DPT	CRS.	COURSE TITLE	THEORY	LAB	COURSE
MTT	218	COMPUTER INTEGRATED MANUFACTURING (CIM)	3	0	3
Course Description				Updated	10/06
PREREQUISITE: As determined by college.					
NOTE: There is an approved standardized plan-of-instruction for this course.					
This course is a basic introduction to concepts related to the computer integrated manufacturing (CIM) process. Students cover the design requirements associated with such a cell (center), how a center is integrated into the full system, and the technician's role in the process improvement of not only the cell but the full CIM system. Related safety and inspection and process adjustment are also covered.					
This course is also taught as AUT 262.					

8. Provide the course description. (see directory listing #7 above)

Curriculum Committee.

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9. Does this course have a previously taught equivalent? If so, please list the prefix, number, title, and track number of the previous course.  
Currently, We teach MTT129, which is a 6 credit hour equivalent to both MTT34/135

Submitted by Hugo Deangelis Date 6/20/2016  
*Instructor*

Endorsed by  
Approved by  
\*Approved by

SIGNATURES ON FILE.

\*Final approval of any course rests with the Vice President/Dean of Instruction.