

Implementation date

Fall 2010

PROGRAM CONCENTRATION:

CAREER PATHWAY:

COURSE TITLE:

**Healthcare Science
Personal Care Services
Cosmetology Services--Core III**

Course Description: This course is designed to introduce students to advanced scientific and artistic principles in lash and brow tint, haircolor, permanent waves, and relaxers. The course will provide higher level skills that the students can transfer to post-secondary cosmetology schools. Students are required to meet both national and intrastate professional guidelines as designated by applicable regulatory agencies such as the Occupational Health and Safety Administration (OSHA) and the Georgia Board of Cosmetology. Mastery of these standards through project-based learning, technical skills practice, and leadership development activities of the career and technical student organization, SkillsUSA, will provide students with a competitive edge for either entry into the healthcare personal care services marketplace and/or the post-secondary institution of their choice to continue their education and training. SkillsUSA activities should be incorporated throughout instructional strategies developed for the course. In addition, this course offers the possibility of meeting articulation alignment with the technical college standards. This course is considered broad-based with high impact in the personal care service industry. Students will achieve advanced technical content skills necessary to pursue a full range of careers in this program concentration.

Safety and Infection Control

Students will employ health and safety preventions in salons and comprehend their importance in performance and regulatory compliance. Students will achieve advanced technical content skills necessary to pursue a full range of careers in this program concentration.

HS-CS-III-1. Students will maintain a safe work environment and prevent accidents by using safety precautions and/or practices including adherence to hazardous labeling requirements and compliance with safety signs, symbols, and labels.

- a. Analyze the role and the responsibilities of the personal care provider (student) in the classroom, laboratory, and various workplace settings in an emergency situation.
- b. Demonstrate preparedness procedures for each emergency situation—fires, electric shock, overloading a circuit, inclement weather, blood spills, and other emergency situations that may occur in the classroom/laboratory or workplace.
- c. Demonstrate all safety procedures when working with chemicals.
- d. Demonstrate all infection control procedures when working in the clinic lab.
- e. Demonstrate proper care and safety when working with models/clients.

HS-CS-III-2. Students will understand and apply infection control guidelines including techniques for sanitation, disinfection, and sterilization.

- a. Describe the importance of infection control in the personal care service industry.

Implementation date

Fall 2010

- b. Discriminate between the risk and prevention of contamination in the personal care service.
- c. Demonstrate sanitizing, disinfecting, and sterilization techniques used in the personal care service industry.

Academic Standard(s):

SCSh2 Students will use standard safety practices for all classroom laboratory and field investigations.

- a. Follow correct procedures for use of scientific apparatus.
- b. Demonstrate appropriate techniques in all laboratory situations.
- c. Follow correct protocol for identifying and reporting safety problems and violations.

Lash and Brow Tints

Students will perform proper lash and brow tints using proper procedures and safety measures. Safety and infection control procedures will be followed.

HS-CS-III-3. Students will to able to perform lash and brow tinting. Emphasis will be placed on safety and infection control procedures. Practical applications can be simulated or on a model/client.

- a. Demonstrate proper lash tinting, using artificial lashes or a model/client.
- b. Demonstrate proper brow tinting using hair swatches or a model/client.
- c. Perform tinting procedures using safety and infection control procedures.

Haircoloring

Students will interpret the laws of color, level systems, natural levels, tones, hair structure, classifications of hair color, developers, lighteners, and hair color applications. Emphasis will be placed on the chemistry of color and how it relates to formulations. Students will learn color formulations for semi-permanent, demi-permanent, permanent, high-lift blondes, lighteners, gray coverage and color corrections. This course will provide the students with basic and advanced haircolor techniques to include foiling highlights and lowlights, slicing, and balayage. The students will learn color corrections including pre-softening, fillers, and soap caps. Record and release forms will be derived from hair analysis.

HS-CS-III-4. Students will illustrate their understanding of color theory including, law of color, primary, secondary, tertiary, complementary colors, natural levels, and contributing pigment levels by creating different haircolor activities. Predisposition and strand tests will be included in the haircolor services.

- a. Demonstrate safety and infection control procedures when working with all chemical services.
- b. Record client record and release cards to reflect hair analysis and service results.

Implementation date

Fall 2010

- c. List the principals of primary, secondary, and tertiary colors.
- d. Explain complementary colors and their use in color formulations.
- e. Explain the level system used in haircoloring.
- f. Demonstrate understanding of underlying pigment and how it affects the outcome of color
- g. Demonstrate a working knowledge of color theory, including the law of color, with either hair swatches, mannequins, or clients.
- h. Demonstrate understanding of complementary colors.
- i. Diagram natural and contributing pigment levels used in haircoloring.
- j. Demonstrate and differentiate between the predisposition test and the strand test

Academic Standard(s):

SCSh4 Students will use tools and instruments for observing, measuring, and manipulating scientific equipment and materials.

- a. Develop and use systematic procedures for recording and organizing information.

HS-CS-III-5. Students will demonstrate a proper haircolor consultation and color formulations. Students will conduct hair analysis and evaluate the results in order to recommend a professional haircolor service. Students will recommend a professional haircolor using proper color formulations from their analysis.

- a. Demonstrate a proper hair color analysis by evaluating the client's hair texture, density, porosity, and general hair condition.
- b. Determine client's natural hair level, existing hair color, tone, and desired hair color.
- c. Create color formulations for temporary, semi-permanent, and demi-permanent haircolor using proper hair analysis and desired hair color and tone.

Academic Standard(s):

ELA9RC4 The student establishes a context for information acquired by reading across subject areas. The student:

- a. Explores life experiences related to subject area content.

HS-CS-III-6. Students will distinguish between different haircolor developers and levels of lift in haircolor. The chemistry of color and how it relates to formulations as well as the end result. Students will create special effect haircoloring formulations using permanent hair color and high-lift blondes and toning.

- a. Describe hair color developers, stating the difference in each and determine the predicted level or levels of lift in the hair (10, 20, 30 and 40 volume developers).
- b. Explain how the chemistry of color works and affects different types of hair color.
- c. Compute different formulations for permanent hair color and high lift blondes utilizing natural levels, existing levels, and contributing pigment levels.
- d. Create advanced haircolor formulations, using either hair swatches, mannequins, and/or clients.

Implementation date

Fall 2010

- e. Predict need of using complementary colors to tone unwanted contributing pigment levels.
- f. Judge hair color results for different formulations and determine if desired haircolor results are achieved.
- g. Devise alternative color formulations for any undesired results.

HS-CS-III-7. Students will create advanced haircolor formulations and applications for lighteners and gray coverage. Application techniques will include foiling, using both high and low lights, caps, slicing and balayage.

- a. Illustrate different haircolors on swatches, mannequins, and/or clients using various techniques for lightening and gray coverage.
- b. Demonstrate foiling techniques using either high or low lights.
- c. Devise different haircolor formulations for gray coverage.
- d. Construct different slicing patterns on a mannequin and/or client by using cholesterol or haircolor.
- e. Demonstrate the proper techniques for using the cap method for haircoloring.
- f. Demonstrate the proper balayage techniques.

HS-CS-III-8. Students will determine when to use the recommended techniques and formulations for corrective haircolor. Students will examine the importance of pre-softening, fillers, tint removal, tint back, and soap caps, including proper applications.

- a. Discriminate between the different color corrective applications and services and determine when each is recommended.
- b. Demonstrate the proper techniques for pre-softening resistant gray hair.
- c. Describe the advantages of using a color filler for equalizing porosity and unpigmented hair.
- d. Distinguish the difference between tint removal and tint back.
- e. Demonstrate proper application of a soap cap.

Academic Standard(s):

ELABLRC2 The student participates in discussions related to curricular learning in all subject areas. The student:

- a. Identifies messages and themes from books in all subject areas.
- c. Relates messages and themes from one subject area to those in another area.

Intermediate Chemical Texturing

Students will describe the scientific process of the physical and chemical reactions of permanent waves. Students will evaluate the role of hair structure, including amino acids, peptide bonds, end bonds, side bonds, hydrogen, salt bonds, disulfide bonds and determine how these bonds are affected during permanent waving. Students will compare and contrast the difference between acid and alkaline perms including waving lotion, neutralizer, and the role of each. Client consultations will include chemical service history, texture, density, porosity and elasticity and direction of hair growth, and correct perm selection. Students will demonstrate different methods

Implementation date

Fall 2010

of base control and define their end results. Various perm wrap techniques will be demonstrated, including basic perm wrap, curvature, bricklay, and spiral. Timing of perm applications will be assessed. Precautions and special problems in a permanent waving will be critiqued. Safety precautions for permanent and Hazardous Duty Standards Act compliance will be addressed in this unit.

HH-CS-III-9. Students will evaluate the physical and chemical reactions of permanent waves and how the hair is altered in a permanent wave service.

- a. Synthesize the different chemical bonds that form the polypeptide chains and determine how they are reformed by chemical reactions of a permanent wave.
- b. Justify concerns with weakening the peptide bonds during a chemical service.
- c. Define the following and their role in permanent waving: peptide bonds, end bonds, side bonds, hydrogen, salt, and disulfide bonds.
- d. Describe how chemicals in the permanent wave process produce a chemical change in the hair structure.

Academic Standard(s):

SC1 Students will analyze the nature of matter and its classifications.

- b. Identify substances based on chemical and physical properties.

SC3 Students will use the modern atomic theory to explain the characteristics of atoms.

- c. Explain the relationship of the proton number to the element's identity.
- e. Compare and contrast types of chemical bonds (i.e., ionic, covalent).

SC5 Students will understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.

- a. Demonstrate the effects of changing concentration, temperature, and pressure on chemical reactions.
- b. Investigate the effects of a catalyst on chemical reactions and apply it to everyday examples.

HS-CS-III-10. Students will compare and contrast the different types of permanent waves, ingredients, process, recommended hair types, advantages and disadvantages of each perm.

- a. Explain the difference between acid and alkaline perms, including the pH., chemical process, advantages, and disadvantages.
- b. Describe the chemical reactions of the waving lotion and the neutralizer.
- c. Compare the chemical reaction of glyceryl monothioglycolate in acid perms and ammonium thioglycolate in alkaline perms, and determine the hair type that works best with each product.
- d. Compare and contrast the difference between exothermic and endothermic waves along with the chemical reaction on the hair.
- e. Evaluate important factors to consider when selecting the correct type of perm for a client.

Implementation date

Fall 2010

Academic Standard(s):

SC7 Students will characterize the properties that describe solutions and the nature of acids and bases.

- a. Explain the process of dissolving in terms of solute/solvent interactions:
 - * Observe factors that affect the rate at which a solute dissolves in a specific solvent
- b. Compare, contrast, and evaluate the nature of acids and bases:
 - * Strong vs. weak acids/bases in terms of percent dissociation
 - * pH
 - * Acid-Base neutralization

HS-CS-III-11. Students will be able to demonstrate a professional client consultation for a permanent wave service.

- a. Perform client consultations for a chemical permanent wave using a Client Record Card.
- b. Evaluate the client's hair condition, including texture, density, porosity, elasticity, hair growth direction and overall general hair condition. Include client chemical history.
- c. Determine correct type of perm according to findings of the client's hair analysis.

Academic Standards (s):

SCSh3 Students will identify and investigate problems scientifically.

- a. Suggest reasonable hypotheses for identified problems.
- b. Develop procedures for solving scientific problems.
- c. Collect, organize and record appropriate data.
- e. Develop reasonable conclusions based on data collected.
- f. Evaluate whether conclusions are reasonable by reviewing the process and checking against other available information.

HS-CS-III-12. Students will be able to discriminate between different perm tools for various perm wraps according to the desired results. Students will compare and contrast perm tools and their results. Various end wraps will be used. Different base controls and how they relate to the final curl results will be emphasized. Students will use all safety and infection control procedures in the clinic/lab.

- a. Differentiate between straight and concave perm tools.
- b. Illustrate the proper use of double, bookend, and cushion wrap.
- c. Demonstrate on-base, half-off base and off-base placement using various perm tools.
- d. Design various perm patterns including basic perm wrap, bricklay, curvature, and spiral.
- e. Record perm wrapping time to show an increase in speed.
- f. Demonstrate safety and infection control when working in the lab/clinic.

Academic Standard(s):

SCSh8 Students will understand important features of the process of scientific inquiry.

Students will apply the following to inquiry learning practices:

Implementation date

Fall 2010

- a. Scientific investigators control the conditions of their experiments in order to produce valuable data.
- b. Scientific researchers are expected to critically assess the quality of data including possible sources of bias in their investigation's hypotheses, observations, data analyses, and interpretations.

SCSh2 Students will use standard safety practices for all classroom laboratory and field investigations.

- a. Follow correct procedures when using scientific apparatus.
- b. Demonstrate appropriate techniques in all laboratory situations.
- c. Follow correct protocol for identifying and reporting safety problems and violations.

HS-CS-III-13. Students will evaluate various perm problems, their causes, and methods of correction.

- a. Evaluate different reasons for over-processed and under-processed hair and methods to avoid.
- b. Describe metallic perms and their importance in identification when perming.
- c. Determine different alternatives in correcting problems in perms.

Chemical Hair Relaxing

Students will perform proper hair relaxers on mannequins or clients. Students will evaluate the role of the hair structure including

Academic Standard(s):

SCSh3 Students will identify and investigate problems scientifically.

- a. Suggest reasonable hypotheses for identified problems.
- b. Develop procedures for solving scientific problems.
- c. Collect, organize, and record appropriate data.
- d. Graphically compare and analyze data points and/or summary statistics.
- e. Develop reasonable conclusions based on data collected.
- f. Evaluate whether conclusions are reasonable by reviewing the process and checking against other available information.

amino acids, peptide bonds, end bonds, side bonds, hydrogen, salt bonds, disulfide bonds and determine how these bonds are affected during hair relaxer services. Emphasis will be placed on chemistry of relaxers, types of relaxers, (including an ammonium thioglycolate and sodium hydroxide), consultation/ hair analysis selection of products, record keeping, properly timed applications, special problems, safety and the Hazardous Duty Standard Act.

HS-CS-III-14. Students will explain the chemistry of hair relaxing and types of relaxers.

- a. Describe the chemistry of hair relaxing and the role of reduction reactions in relaxing.
- b. Explain the chemical and physical change that take place during hair relaxing.
- c. Distinguish between ammonium thioglycolate and sodium hydroxide relaxers.
- d. State the role of the relaxer and neutralizer.
- e. Identify relaxer strengths, including mild, regular, and super.

Implementation date
Fall 2010

Academic Standard(s):

SC5 Students will understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.

- a. Demonstrate the effects of changing concentration, temperature, and pressure on chemical reactions.
- b. Investigate the effects of a catalyst on chemical reactions and apply it to everyday examples.

HS-CS -III-15. Students will be able to perform client consultations for hair relaxer services including hair analysis and correct product selection.

- a. Perform client consultations for hair relaxer service including hair texture, porosity, elasticity, density, direction of hair growth, and general hair condition.
- b. Determine the type of relaxer (thio, hydroxide, etc.) including mild, regular, or super for each client consultation.
- c. Record information from consultation, product selection, and results on client record cards.

HS-CS-III-16. Students will demonstrate timed relaxer applications using mannequins or clients. Applications performed will include virgin relaxer and retouch relaxers. Students will evaluate special problems that could occur while relaxing hair.

- a. Demonstrate timed virgin and retouch relaxers.
- b. Record information from relaxer services on client record card.
- c. Evaluate special problems' area of concern in hair relaxers and assess methods of corrections.

HS-CS-III-17. Students will perform hair relaxer services using proper safety, infection control, and Hazardous Duty Standards Act in all procedures.

- a. Describe safety standards and precautions when performing hair relaxer services.
- b. Perform hair relaxer services using safety procedures and infection control guidelines.

Academic Standard(s):

SCSh2 Students will use standard safety practices for all classroom laboratory and field investigations.

- a. Follow correct procedures for use of scientific apparatus.
- b. Demonstrate appropriate techniques in all laboratory situations.
- c. Follow correct protocol for identifying and reporting safety problems and violations.

Implementation date

Fall 2010

Academic Foundations

HS-IHS-1: Students will demonstrate knowledge and understanding of the academic subject matter required for proficiency within their area. Academic Standards are integrated throughout the standard.

Reading Across the Curriculum

Reading Standard Comment

After the elementary years, students engage in reading for learning. This process sweeps across all disciplinary domains, extending even to the area of personal they experience text in all genres and modes of discourse. In the study of various disciplines of learning (language arts, mathematics, science, social studies), students must learn through reading the communities of discourse of each of those disciplines. Each subject has its own specific vocabulary, and for students to excel in all subjects, they must learn the specific vocabulary of those subject areas in context.

Beginning with the middle grades years, students begin to self-select reading materials based on personal interests established through classroom learning. Students become curious about science, mathematics, history, and literature as they form contexts for those subjects related to their personal and classroom experiences. As students explore academic areas through reading, they develop favorite subjects and become confident in their verbal discourse about those subjects.

Reading across curriculum content develops both academic and personal interests in students. As students read, they develop both content and contextual vocabulary. They also build good habits for reading, researching, and learning. The Reading Across the Curriculum standard focuses on the academic and personal skills students acquire as they read in all areas of learning.

Students will enhance reading in all curriculum areas by:

- a. Reading in all curriculum areas
 - Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas.
 - Read both informational and fictional texts in a variety of genres and modes of discourse.
 - Read technical texts related to various subject areas.
- b. Discussing books
 - Discuss messages and themes from books in all subject areas.

Implementation date
Fall 2010

- Respond to a variety of texts in multiple modes of discourse.
 - Relate messages and themes from one subject area to messages and themes in another area.
 - Evaluate the merit of texts in every subject discipline.
 - Examine author's purpose in writing.
 - Recognize the features of disciplinary texts.
- c. Building vocabulary knowledge
- Demonstrate an understanding of contextual vocabulary in various subjects.
 - Use content vocabulary in writing and speaking.
 - Explore understanding of new words found in subject area texts.
- d. Establishing context
- Explore life experiences related to subject area content.
 - Discuss in both writing and speaking how certain words are subject area related.
 - Determine strategies for finding content and contextual meaning for unknown words.

CTAE Foundation Skills

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state's academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education's 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.

Implementation date
Fall 2010

CTAE-FS-3 Communications: Learners use various communication skills in expressing and interpreting information.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

CTAE-FS-6 Systems: Learners understand a variety of organizational structures and functions.

CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.

CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.