Curriculum Committee Proposal Summary
1/28/2016

Department: Academic Affairs

UCC_Chair

From: Werman, Steve
Sent: Thursday, January 14, 2016 4:23 PM
To: UCC_Chair
Cc: Haas, Kurtis; Futhey, Carol
Subject: RE: UCC Exec. Subcommittee review of the SUPP course modifications

Hi Everyone,

A University College is a unit of a University that usually houses Liberal Arts degree programs, supplemental education programs and courses, and occasionally developmental education and options for career and major planning.

There has been conversations in upper administration at CMU about moving from WCCC/developmental/supplemental programs, under the umbrella of a "University College" as a clearly defined unit of CMU. Presently, for example, WCCC exists as a "Division of CMU". The establishment of a University College within CMU would allow us to promote and identify WCCC and other programs, not housed in existing departments, more clearly. The Provost has indicated that the UNIV prefix would reflect this unit as well and this may be an initial step in moving in University College direction. Also the term "supplemental" has a somewhat negative connotation among students. So my thinking is that CMU may establish a University College model for SUPP and WCCC components. Presently SUPP is "homeless" and resides in Academic Affairs, moving these courses and their governance to a University College within CMU makes better sense. If you need to know more about what a University College might look like follow the links below:

http://www.unco.edu/universitycollege/

https://nau.edu/university-college/

http://www.memphis.edu/univcoll/

Steve Werman

From: UCC_Chair
Sent: Thursday, January 14, 2016 3:14 PM
To: Werman, Steve <swerman@coloradomesa.edu>
Cc: Hawkins, Jeremy <jrhawkins@coloradomesa.edu>
Subject: UCC Exec. Subcommittee review of the SUPP course modifications

Hi Steve,
The only thing that came up from the UCC executive subcommittee review of the SUPP course modification proposals was just a request for an explanation of what "University College" refers to. Could you please send a sentence to clarify that to add to the justification?
Thanks,
Jessie

2015-16 Undergraduate Curriculum Committee
Jeremy Hawkins, Chair (ext. 1374)
Scott Kessler, Vice-chair (ext. 1673
Jessie Barnett, Recording Secretary (ext. 1463)

Course Modifications

SUPP 096

	Current	Proposed
Course Prefix:	SUPP	UNIV
Course No.:	096	
Credit Hours	1-3	
Course Title:	Gearing Up for College	

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix change was recommended by the WGISAS group to the VPAA to be reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. This course will be assigned to the University College in the future.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 100

	Current	Proposed
Course Prefix:	SUPP	UNIV
Course No.:	100	
Credit Hours	1	
Course Title:	Higher Education Success Skills	College Success Skills
Abbreviated	Higher Ed. Success Skill	College Success Skills

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix and title change was recommended by the WGISAS group to the VPAA to clarify that the 100 course is intended for first year students needing basic college success skills before moving into SUPP/UNIV 101. The course does not cover the breadth of Higher Education, but rather basic success skills for entry level college work, hence the title change. Also, the prefix is reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 101

	Current	Proposed
Course Prefix:	SUPP	UNIV
Course No.:	101	
Credit Hours	2	
Course Title:	Introduction to Higher Education	First Year College Success
Abbreviated	Intro to Higher Ed.	First Yr College Success

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix and title change was recommended by the WGISAS group (fall of 2015) to the VPAA to clarify the intention of the 101 course for first year students. The change in prefix is reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. In the future they will be aligned with a University College.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 105

	Current	**Proposed**
Course Prefix:	SUPP	UNIV
Course No.:	105	
Credit Hours	1	
Course Title:	Competency Portfolio Development	

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix change was recommended by the WGISAS group to the VPAA to be reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. This course will be assigned to the University College in the future.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 196

	Current	**Proposed**
Course Prefix:	SUPP	UNIV
Course No.:	196	
Credit Hours	1-3	
Course Title:	Topics	

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix change was recommended by the WGISAS group to the VPAA to be reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. This course will be assigned to the University College in the future.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 201

	Current	**Proposed**
Course Prefix:	SUPP	UNIV
Course No.:	201	
Credit Hours	3	
Course Title:	Theory and Practice of College Peer Tutoring	

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix change was recommended by the WGISAS group to the VPAA to be reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. This course will be assigned to the University College in the future.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 202

	Current	**Proposed**
Course Prefix:	SUPP	UNIV
Course No.:	202	
Credit Hours	2	
Course Title:	Sophomore Year Experience	

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix change was recommended by the WGISAS group to the VPAA to be reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. This course will be assigned to the University College in the future.

Proposed by: Steve Werman Expected Implemention: Fall 2016

SUPP 296

	Current	**Proposed**
Course Prefix:	SUPP	UNIV
Course No.:	296	
Credit Hours	1-3	
Course Title:	Topics	

Requirement or listed choice for any program of study: Yes ☐ No ☑

Justification:

The prefix change was recommended by the WGISAS group to the VPAA to be reflective of the University College designation. Formerly SUPP courses were not assigned to any academic department, but rather the Office of Academic Affairs. This course will be assigned to the University College in the future.

Proposed by: Steve Werman Expected Implemention: Fall 2016

Department: Health Sciences

Course Modifications

NURS 101

	Current	Proposed
Course Prefix:	NURS	
Course No.:	101	
Credit Hours	1	
Course Title:	Pharmacology Calculations	

Prerequisites:

Current: Biol 209, Biol 209L, Biol 210, 210L, Engl 111, Engl 112, Psych 233

Proposed:
Biol 209, Biol 209L, Engl 211, Psyc 223, Math 113, Biol 210, Biol 210L, Engl 112, Biol 244, Psyc 150

Co-requisites:

Current: Nurs 112, Nurs 106, Nurs 106L, Nurs 107, Nurs 107L, Nurs 105L

Proposed: Nurs 106, Nurs 106L, Nurs 107, Nurs 107L

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Science Tech Cert, Practical Nurse

Justification:

See justification for PN Program Modification.

Topical course outline, current:

NA

Topical course outline, proposed:

NA

Student Learning Outcomes, current:

NA

Student Learning Outcomes, proposed:

NA

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 106

	Current	Proposed
Course Prefix:	NURS	
Course No.:	106	
Credit Hours	3	5
Course Title:	Fundamental Medical-Surgical Concepts I	Adult Concepts I/Pharmacology
Abbreviated		Adult Concepts I/Pharm
Contact	Lecture 45	Lecture 75
	Lab	Lab

	Field	Field
	Studio	Studio
	Other	Other
Engage Min.:	2250	3750
Prep Min.:	4500	7500

Prerequisites:

Current: Biol 209, Biol 209L, Biol 210, 210L, Engl 111, Engl 112, Psych 233

Proposed:
Biol 209, Biol 209L, Engl 211, Psyc 223, Math 113, Biol 210, Biol 210L, Engl 112, Biol 244, Psyc 150

Co-requisites:

Current: Nurs 112, Nurs 101, Nurs 106L, Nurs 107, Nurs 107L, Nurs 105L

Proposed: Nurs 101, Nurs 106L, Nurs 107, Nurs 107L

Description for catalog:

Current: Course introduces the role of the nurse in assessing and meeting the medical and surgical needs of adults across the lifespan in various health care settings. Knowledge from foundations of nursing, the sciences, pharmacology and nutrition provide foundations for nursing care for medical/surgical clients.

Proposed:

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Science Tech Cert, Practical Nurse

Justification:

See justification for the PN program modification.

Topical course outline, current:

Immune System Function
Nursing Care of Patients with Infections
Cardiovascular System Function, Assessment and Therapeutic Measures
Nursing Care of Patients with Hypertension
Nursing Care of Patients in Shock
Developmental Considerations in the Nursing Care of Adult
Nursing Care of Patients in Pain
Nursing Care of Older Adult Patients
Nursing Care of Patients with Fluid, Electrolyte, and Acid Base Imbalances
Nursing Care of Patients with Heart Failure
Respiratory System Function, Assessment, and Therapeutic Measures
Nursing Care of Patients with Upper Respiratory Disorders
ursing Care of Patients with Lower Respiratory Tract Disorders
Urinary System Function, Assessment, and Therapeutic Measures
Nursing Care of Patients with Disorders of the Urinary System
Nursing Care of Patients with Upper Intestinal Disorders
Nursing Care of Patients with Lower Gastrointestinal Disorders
Integumentary System Function, Assessment and Therapeutic Measures
Nursing Care of Patients with Skin Disorders
Nursing Care of Patients Having Surgery
Musculoskeletal System Function and Assessment
Gastrointestinal, Hepatobiliary and Pancreatic Systems Functions, Assessment and Therapeutic Measures
Nursing Care of Patients with Disorders of the Endocrine Pancreas
Nursing Care of Patients with Occlusive Cardiovascular Disorders
Nursing Care of Older Adult Patients
Nursing Care of Patients with Cerebral Vascular Disorders
Nursing Care of Patients with Liver, Pancreatic, and Gallbladder Disorders

Complementary and Alternative

Topical course outline, proposed:

Immune System Function
Nursing Care of Patients with Infections
Cardiovascular System Function, Assessment and Therapeutic Measures
Nursing Care of Patients with Hypertension
Nursing Care of Patients in Shock
Developmental Considerations in the Nursing Care of Adult
Nursing Care of Patients in Pain
Nursing Care of Older Adult Patients
Nursing Care of Patients with Fluid, Electrolyte, and Acid Base Imbalances
Nursing Care of Patients with Heart Failure
Respiratory System Function, Assessment, and Therapeutic Measures
Nursing Care of Patients with Upper Respiratory Disorders
ursing Care of Patients with Lower Respiratory Tract Disorders
Urinary System Function, Assessment, and Therapeutic Measures
Nursing Care of Patients with Disorders of the Urinary System
Nursing Care of Patients with Upper Intestinal Disorders
Nursing Care of Patients with Lower Gastrointestinal Disorders
Integumentary System Function, Assessment and Therapeutic Measures
Nursing Care of Patients with Skin Disorders
Nursing Care of Patients Having Surgery
Musculoskeletal System Function and Assessment
Gastrointestinal, Hepatobiliary and Pancreatic Systems Functions, Assessment and Therapeutic Measures
Nursing Care of Patients with Disorders of the Endocrine Pancreas
Nursing Care of Patients with Occlusive Cardiovascular Disorders
Nursing Care of Older Adult Patients
Nursing Care of Patients with Cerebral Vascular Disorders
Nursing Care of Patients with Liver, Pancreatic, and Gallbladder Disorders
Complementary and Alternative
Drug Definitions, Names, Standards, & Information Sources
Principles of Drug Action & Drug Interactions
Drug Action Across the Life Span
Drugs Affecting the Central Nervous System
Drugs Used for Diuresis
Drugs Used to Treat Hypertension
Drugs Used to Treat Heart Failure
Drugs Used for Pain Management
Drugs Used to Treat Upper Respiratory Disorders
Drugs Used to Treat Lower Respiratory Disorders
Drugs Used to Treat Disorders of the Urinary System
Drugs Used to Treat Gastroesophageal Reflux and Peptic Ulcer Disease
Drugs Used to Treat Nausea and Vomiting
Drugs Used to Treat Constipation and Diarrhea
Antimicrobial Agents
Drugs Used to Treat Diabetes Mellitus
Drugs Used to Treat Dyslipidemias
Drugs Used to Treat Angina Pectoris
Drugs Used to Treat Peripheral Vascular Diseases
Drugs Used to Treat Thromboembolic Disorders
Drugs Used to Treat Parkinson's disease
Drugs Used to Treat Seizure Disorders

Student Learning Outcomes, current:

Discriminate between focusing on disease versus optimal functioning when planning nursing care for adult patients across the life span.
Integrate prior and current learning concepts about diagnostics, dietetics, and pharmacology with nursing care.
Integrate critical thinking skills with the nursing process for care of the adult across the life span with health problems.
Explain in depth and breadth etiology and pathophysiology related to signs and symptoms and treatment modalities for adult patients across the life span.
Discuss principles of cultural awareness in the plan of care for patients with commonly occurring health conditions.
Compare and contrast appropriate teaching/learning strategies utilized with the adult patient.
Analyze the impact of psychosocial and cultural values and practices in caring for the adult patient across the life span.
Identify the cultural considerations of administering medications to all patients.

Student Learning Outcomes, proposed:

Discriminate between focusing on disease versus optimal functioning when planning nursing care for adult patients across the life span.
Integrate prior and current learning concepts about diagnostics, dietetics, and pharmacology with nursing care.
Integrate critical thinking skills with the nursing process for care of the adult across the life span with health problems.
Explain in depth and breadth etiology and pathophysiology related to signs and symptoms and treatment modalities for adult patients across the life span.
Discuss principles of cultural awareness in the plan of care for patients with commonly occurring health conditions.
Compare and contrast appropriate teaching/learning strategies utilized with the adult patient.
Analyze the impact of psychosocial and cultural values and practices in caring for the adult patient across the life span.
Identify the cultural considerations of administering medications to all patients.
Demonstrate knowledge of the classification of drugs and their physiologic and therapeutic effects on the body.
Relate significant patient assessments pertaining to specific drug therapy
Define and identify terminology and abbreviations associated with the administration of medications
Calculate correctly with 90% accuracy required dosages of drugs
Calculate and describe drug therapy for pediatric patients.
Practice the role of the professional nurse in the administration of medications.
Identify teaching necessary for identified patients and drugs.
Demonstrate the ability to use appropriate reference materials when seeking information about drugs that are to be administered.
Discuss legal and ethical implications involved with the administration of drugs.

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 106L

	Current	**Proposed**
Course Prefix:	NURS	
Course No.:	106L	

Credit Hours 2

Course Title: Fundamental Medical-Surgical I Laboratory Adult Concepts 1/Pharmacology Laboratory

Abbreviated Fund Med Surg Concept I Adult Concepts I Lab

Prerequisites:

Current: Biol 209, Biol 209L, Biol 210, 210L, Engl 111, Engl 112, Psych 233

Proposed:
Biol 209, Biol 209L, Engl 211, Psyc 223, Math 113, Biol 210, Biol 210L, Engl 112, Biol 244, Psyc 150

Co-requisites:

Current: Nurs 112, Nurs 101, Nurs 106L, Nurs 107, Nurs 107L, Nurs 105L

Proposed: Nurs 101, Nurs 106, Nurs 107, Nurs 107L

Description for catalog:

Current: Course introduces the role of the nurse in assessing and meeting the medical and surgical needs of adults across the lifespan in various health care settings. Knowledge from foundations of nursing, the sciences, pharmacology and nutrition provide foundations for nursing care for medical/surgical clients.

Proposed: Application of nursing concepts, skills, critical thinking, pharmacology, assessment and medication administration in caring for a variety of clients in various health care settings.

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Sciences Tech Cert, Practical Nurse

Justification:

See justification for the PN program modification.

Topical course outline, current:

N/A

Topical course outline, proposed:

NA -No change in course outline. Already incorporated into clinical. No change from current course.

Student Learning Outcomes, current:

N/A

Student Learning Outcomes, proposed:

N/A

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 107

	Current	**Proposed**
Course Prefix:	NURS	
Course No.:	107	
Credit Hours	3	
Course Title:	Foundations of Nursing	

Prerequisites:

Current: Biol 209, Biol 209L, Biol 210, Biol 210L, Psyc 233, Engl 111, Engl 112

Proposed:
Biol 209, Biol 209L, Engl 211, Psyc 223, Math 113, Biol 210, Biol 210L, Engl 112, Biol 244, Psyc 150

Co-requisites:

Current: Nurs 101, Nurs 112, Nurs 107, Nurs 106L Nurs 107L, Nurs 105L

Proposed: Nurs 101, Nurs 106, Nurs 106L, Nurs 107L

Description for catalog:

Current: Course introduces the applications of critical thinking and the nursing process to clients in a variety of community and acute care settings. Emphasis is in holistic health care wellness-illness continuum.

Proposed: Exploration of basic nursing concepts and skills to develop critical thinking while utilizing the nursing process.

Requirement or listed choice for any program of study: Yes ☑ No ☐

Justification:

See justification for PN program modification.

Topical course outline, current:

NA

Topical course outline, proposed:

NA

Student Learning Outcomes, current:

NA

Student Learning Outcomes, proposed:

NA

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 107L

	Current	**Proposed**
Course Prefix:	NURS	
Course No.:	107L	
Credit Hours	3	
Course Title:	Foundations of Nursing Laboratory	

Prerequisites:

Current: Biol 209, Biol 209L, Biol 210, Biol 210L, Psyc 233, Engl 111, Engl 112

Proposed:
Biol 209, Biol 209L, Engl 211, Psyc 223, Math 113, Biol 210, Biol 210L, Engl 112, Biol 244, Psyc 150

Co-requisites:

Current: Nurs 101, Nurs 112, Nurs 107, Nurs 106L Nurs 107L, Nurs 105L

Proposed: Nurs 101, Nurs 106, Nurs 106L, Nurs 107

Description for catalog:

Current: Class introduces the applications of critical thinking and the nursing process to clients in a variety of community and acute care settings. Emphasis is in holistic healthcare wellness-illness continuum.

Proposed: Application of basic nursing and IV certification skills through training, practice, and checkoffs of essential skills needed for safe practice.

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Science Tech Cert, Practical Nurse

Justification:

See Justification for PN program modification.

Topical course outline, current:

Medical Terminology
Medical Asepsis & Infection Control
Safety
Personal Care
Vital Signs
Nursing Process and Decision Making
Documentation
Physical Assessment
Pain Management and Restorative Sleep
Nutrition
Fluid, Electrolytes, and Acid Base Imbalances
Administering Oral, Topical, and Mucosal Medications
Subcutaneous and Intramuscular Injections
Musculoskeletal Care
Applying Heat and Cold
Respiratory Care
Urinary and Bowel Elimination and Care
Wound Care
Moving and Positioning Patients
Care of Surgical Patient
Surgical Asepsis
Communicating and Understanding
Patient Teaching
Admission, Transfer, and Discharge
Phlebotomy and Blood Specimens
Peripheral Intravenous Therapy
Researching and Preparing Medications
Care of the Elderly
Diagnostic Tests
Growth and Development throughout the Life Span
Promoting Health and Wellness
Health Care Delivery and Economics
Nursing Ethics and Law
Complementary and Alternative Medicine
Loss, Grief and Dying
Ethics, Cultural and Spiritual Aspects of Care

Topical course outline, proposed:

Legal implications
Anatomy and physiology of upper extremity access sites
Commonly used IV fluids
Fluids and electrolytes
Psychological and physical preparation of patient
Complications of IV Therapy
Regulating and monitoring fluids
Equipment and techniques of IV therapy
Replacing and Monitoring IV fluids
Care of Venous Access Device
Termination of peripheral short catheters

Venous Blood Sampling
Pharmacology and Administration of Antibiotics
Medical Terminology
Medical Asepsis & Infection Control
Safety
Personal Care
Vital Signs
Nursing Process and Decision Making
Documentation
Physical Assessment
Pain Management and Restorative Sleep
Nutrition
Fluid, Electrolytes, and Acid Base Imbalances
Administering Oral, Topical, and Mucosal Medications
Subcutaneous and Intramuscular Injections
Musculoskeletal Care
Applying Heat and Cold
Respiratory Care
Urinary and Bowel Elimination and Care
Wound Care
Moving and Positioning Patients
Care of Surgical Patient
Surgical Asepsis
Communicating and Understanding
Patient Teaching
Admission, Transfer, and Discharge
Phlebotomy and Blood Specimens
Peripheral Intravenous Therapy
Researching and Preparing Medications
Care of the Elderly
Diagnostic Tests
Growth and Development throughout the Life Span
Health Care Delivery and Economics
Nursing Ethics and Law
Complementary and Alternative Medicine
Loss, Grief and Dying
Ethics, Cultural and Spiritual Aspects of Care
IV therapy
IV skills

Student Learning Outcomes, current:

Differentiate common variations in assessment data for pediatric and geriatric patients.
Examine the concept of holistic health care and its relationship to the wellness-illness continuum.
Identify physical, psychological, life-style and socio-cultural considerations that influence alterations in health and physical assessment data.
Identify care that meets common health problems and health maintenance and disease prevention
Develop knowledge base, and demonstrate foundational care skills required to provide care in various health care environments.
Analyze assessment and interviewing techniques to gather information.
Distinguish therapeutic communications from other forms of communication
Utilize interview and assessment techniques to collect and organize patient information and build a data base on which to build nursing care decisions.

Discuss bioethical dilemmas including beginning/end of life and quality of life issues.
Utilize interview and assessment techniques to collect and organize patient information and build a data base on which to build nursing care decisions.

Student Learning Outcomes, proposed:

Discuss the role of the LPN in IV therapy
Describe normal physiology of fluid and electrolytes, including adult normal values.
Utilize psychological principles in preparing a patient for IV therapy and/or venous blood sampling.
Describe the local and systemic complications of IV therapy.
Utilize the nursing process to safely administer IV therapy to adult patients in a structured setting.
Describe infection control measures utilized in the performance of IV therapy and venous blood sampling.
Identify the types of peripheral and central venous access devices.
Demonstrate beginning skills in the initiation of IV therapy and venous blood sampling through peripheral and venous access devices.
Calculate the correct rate of flow of an IV solution.
Initiate a minimum of three successful peripheral venipunctures with supervision.
Demonstrate appropriate nursing care, interventions, reporting and documentation related to intravenous therapy/venous blood sampling.
Differentiate common variations in assessment data for pediatric and geriatric patients.
Examine the concept of holistic health care and its relationship to the wellness-illness continuum.
Identify physical, psychological, life-style and socio-cultural considerations that influence alterations in health and physical assessment data.
Identify care that meets common health problems and health maintenance and disease prevention
Develop knowledge base, and demonstrate foundational care skills required to provide care in various health care environments.
Distinguish therapeutic communications from other forms of communication
Utilize interview and assessment techniques to collect and organize patient information and build a data base on which to build nursing care decisions.
Discuss bioethical dilemmas including beginning/end of life and quality of life issues.
Utilize interview and assessment techniques to collect and organize patient information and build a data base on which to build nursing care decisions.

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 117

	Current	Proposed
Course Prefix:	NURS	
Course No.:	117	
Credit Hours	2	4
Course Title:	Nursing Care of the Childbearing Family	Obstetrics and Pediatrics
Abbreviated		OB/Peds
Contact	Lecture 30	Lecture 60
	Lab	Lab
	Field	Field
	Studio	Studio
	Other	Other
Engage Min.:	1500	3000

Prep Min.: 3000 6000

Prerequisites:

Current: Nurs172, Nurs 172L, Nurs 109, Nurs 109L, Nurs 118L, Nurs 101, Nurs 112

Proposed: Nurs 101, Nurs 106, Nurs 106L, Nurs 107, Nurs 107L

Co-requisites:

Current: Nurs 172 L, NURS 117, NURS 117L, NURS 156 NURS 118, NURS 118L, NURS 109, NURS 109L

Proposed: NURS 172L, NURS 172, NURS 117L, NURS 156,

Description for catalog:

Current:

Fundamental course in the nursing care of the childbearing family. Focus on normal pregnancy, physiologic and psychological changes experienced, and care of the normal newborn

Proposed: Exploration of fundamental content in the nursing care of the childbearing family, which focuses on pregnancy, physiologic and psychological changes experienced, and care of the normal newborn. Includes the individual needs of the child from infancy through adolescence focusing on developmental stages, as well as childhood diseases and illness within each stage.

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Sciences Technical Certificate, Practical Nurse

Justification:

See justification for the PN program modification.

Topical course outline, current:

Prenatal Care and Adaptions to Pregnancy
Prenatal Care and Adaptions to Pregnancy cont.
Preterm and Postterm Newborns
The term newborn
Fetal Development
Nursing Care of Women with Complications during pregnancy
Nursing Care of mother and infant during labor
Nursing Management of pain during labor and birth
Nursing Care of Women with complications during labor and birth
Nursing Care of Women with complications during labor and birth cont.
The family after birth

Topical course outline, proposed:

Prenatal Care and Adaptions to Pregnancy
Prenatal Care and Adaptions to Pregnancy cont.
Preterm and Postterm Newborns
The term newborn
Fetal Development
Nursing Care of Women with Complications during pregnancy
Nursing Care of mother and infant during labor
Nursing Management of pain during labor and birth
Nursing Care of Women with complications during labor and birth
Nursing Care of Women with complications during labor and birth cont.
The family after birth
Infant/Toddler
Preschool child/School aged child
Adolescent
Child's experience of hospitalization
Child with a sensory or Neurological Condition
The child with a Musculoskeletal Condition

The child with a skin Condition
The Child with a Respiratory Disorder
The Child with a Gastrointestinal Condition
The Child with a Genitourinary Condition
The Child with a Cardiovascular Disorder
The Child with a condition of the blood, blood-forming organs, or lymphatic system
The Child with a Metabolic Disorder
The newborn with a perinatal Injury or Congenital Malformation

Student Learning Outcomes, current:

Incorporate the legal and ethical implications of maternal-newborn nursing in daily care.
Understand the impact of psychosocial and cultural values and practices in caring for healthy childbearing family.
Integrate knowledge of diagnostics, nutrition, and pharmacology into a plan of care for the childbearing family.
Integrate critical thinking skills with the nursing process for care of the stable childbearing patient.
Use critical thinking skills to explain nursing process for care of the newborn.
Demonstrate appropriate teaching-learning strategies when providing information to the childbearing family.
Accurately report alterations in health affecting the childbearing family.
Discuss health maintenance and promotion from conception through postpartum and the neonatal period with the childbearing family

Student Learning Outcomes, proposed:

Incorporate the legal and ethical implications of maternal-newborn nursing in daily care.
Understand the impact of psychosocial and cultural values and practices in caring for healthy childbearing family.
Integrate knowledge of diagnostics, nutrition, and pharmacology into a plan of care for the childbearing family.
Integrate critical thinking skills with the nursing process for care of the stable childbearing patient.
Use critical thinking skills to explain nursing process for care of the newborn.
Demonstrate appropriate teaching-learning strategies when providing information to the childbearing family.
Accurately report alterations in health affecting the childbearing family.
Discuss health maintenance and promotion from conception through postpartum and the neonatal period with the childbearing family
Understand the major causes of morbidity and mortality in the pediatric population as well as the most common causes and effects of illness in the child.
Apply the concepts of growth and development and developmental assessment to the nursing care of children from infancy through adolescence.
Utilize the nursing process to care for the pediatric client across the health continuum.
Apply critical thinking skills to the care of children and families in a variety of settings.
Utilize previously learned concepts related to assessment, nutrition and pharmacology to acquire new knowledge and skills when working with children and families.
Demonstrate an understanding of the impact that individual psychosocial and cultural values and practices have in caring for the child and family with complications.
Collaborate with the RN to plan safe and effective nursing care for the child utilizing available data.
Evaluate the effectiveness of various teaching modalities utilized in caring for children and their families
Collaborate with the RN to utilize therapeutic communication techniques in planning and providing nursing care to children and families.

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 117L

	Current	Proposed
Course Prefix:	NURS	
Course No.:	117L	
Credit Hours	1	2
Course Title:	Nursing Care of the Childbearing Family Laboratory	Obstetrics and Pediactrics Laboratory
Abbreviated		OB/Peds Lab
		90
Engage Min.:	750	1500
Prep Min.:	375	750

Prerequisites:

Current: Nurs 112, Nurs 101, Nurs 105L, Nurs 107, Nurs 107L, Nurs 106, Nus 106L

Proposed:
Nurs 107, Nurs 107L, Nurs 106, Nurs 106L, Nurs 101

Co-requisites:

Current: Nurs 172, Nurs 172 L, NURS 117, NURS 117L, NURS 156 NURS 118, NURS 118L, NURS 109, NURS 109L

Proposed: NURS 172L, NURS 172, NURS 117, NURS 156,

Description for catalog:

Current:
Fundamental course in the nursing care of the childbearing family. Focus on normal pregnancy, physiologic and psychological changes experienced, and care of the normal newborn

Proposed:
Application of concepts related to pregnancy, newborns, and children from infancy to adolescence utilizing critical thinking, nursing process, and assessment in caring for this population within the various health care settings

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Sciences Technical Certificate, Practical Nurse

Justification:

See justification for the PN program modification.

Topical course outline, current:

NA

Topical course outline, proposed:

No change in course outline. This is a clinical that has no change from current course.

Student Learning Outcomes, current:

NA

Student Learning Outcomes, proposed:

NA

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 156

	Current	Proposed
Course Prefix:	NURS	
Course No.:	156	
Credit Hours	1	
Course Title:	Socialization into Practical Nursing	

Prerequisites:

Current: Nurs106, Nurs 106L, Nurs 107, Nurs 107L, Nurs 105L, Nurs 101, Nurs 112

Proposed:
Nurs 101, Nurs 106, Nurs 106L, Nurs 107, Nurs 107L

Co-requisites:

Current: Nurs 172. Nurs 172 L, NURS 117, NURS 117L, NURS 156 NURS 118, NURS 118L, NURS 109, NURS 109L

Proposed: NURS 172, NURS 172L, NURS 117, NURS 117L

Description for catalog:

Current:

Proposed:

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Science Tech Cert, Practical Nurse

Justification:

See justification for the PN Program modification.

Topical course outline, current:

NA

Topical course outline, proposed:

NA

Student Learning Outcomes, current:

NA

Student Learning Outcomes, proposed:

NA

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 172

	Current	Proposed
Course Prefix:	NURS	
Course No.:	172	

Credit Hours	3	5
Course Title:	Fundamental Medical-Surgical Concepts II	Adult Concepts II/Mental Health
Abbreviated		Adult concepts II/MH
Contact	Lecture 45	Lecture 75
	Lab	Lab
	Field	Field
	Studio	Studio
	Other	Other
Engage Min.:	2250	3750
Prep Min.:	4500	7500

Prerequisites:

Current: Nurs106, Nurs 106L, Nurs 107, Nurs 107L, Nurs 105L, Nurs 101, Nurs 112

Proposed: Nurs 101, Nurs 106, Nurs 106L, Nurs 107, Nurs 107L,

Co-requisites:

Current: Nurs 172 L, NURS 117, NURS 117L, NURS 156 NURS 118, NURS 118L, NURS 109, NURS 109L

Proposed: NURS 172L, NURS 117, NURS 117L, NURS 156,

Description for catalog:

Current: Course offers the clinical practicum to apply the related nursing theory in medical surgical nursing using the nursing process to assist clients with more complex health care needs.

Proposed:
Exploration of concepts of medical surgical clients related to deviations from health and wellness utilizing critical thinking within the nursing process. Incorporates assessment and teaching of clients around the health care continuum.

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Science Tech Cert, Practical Nurse

Justification:

See justification for the PN program modification.

Topical course outline, current:

The Respiratory System
The Surgical Patient and Musculoskeletal System
Acute Cardiac Disorders
Understanding the Neurological System
Endocrine Disorders and Emergent Care
Anxiety disorders
History of mental health
Communication
Ethics and Law in mental health
sociocultural influences on mental halth
Coping mechanisms
Threats to mental health
Special populations

Topical course outline, proposed:

The Respiratory System
The Surgical Patient and Musculoskeletal System

Acute Cardiac Disorders
Understanding the Neurological System
Endocrine Disorders and Emergent Care
Pschiatric distorders
Therapeutic Communication

Student Learning Outcomes, current:

Differentiate between focusing on disease versus optimal functioning when planning nursing care for adult patients across the life span.
Integrate prior and current learning concepts about diagnostics, dietetics, and pharmacology with nursing care.
Integrate, in collaboration with the RN, critical thinking skills with the nursing process for care of the adult across the life span with health problems.
Apply critical thinking when assess etiology and pathophysiology related to signs and symptoms and treatment modalities for adult patients across the life span.
Discuss principles of cultural competency to the nursing care of individuals across the life span.
Discuss cultural issues that influence family dynamics throughout the life span.
Compare and contrast appropriate teaching/learning strategies utilized with the adult patient.
Analyze the impact of psychosocial and cultural values and practices in caring for the adult patient across the life span.
Discuss principles of cultural competency related to the nursing care of individuals with psychiatric disorders.
Discuss cultural issues that influence family dynamics with psychiatric disorders.
Discuss diagnostic classifications in treatment planning.
Apply nursing process theory to clients with psychiatric disorders.
Examine the scope and significance of issues and trends impacting psychiatric health care.
Explain the impact of legal, ethical, and cultural issues in the delivery of psychiatric care.
Discuss therapeutic communication techniques and promote therapeutic relationships.
Discuss documentation and communication appropriately with multidisciplinary teams.
Participate in the evaluation of outcomes in implementing change.
Apply principles of cultural competency to the nursing care of individuals with psychiatric disorders.
Formulate teaching plans based upon outcomes with consideration given to biological, psychological, spiritual, cultural, developmental, environmental and economic factors.
Use established guidelines in prioritizing and organizing nursing care.
Promote ethical, legal and professional awareness and responsibility in others.

Student Learning Outcomes, proposed:

Differentiate between focusing on disease versus optimal functioning when planning nursing care for adult patients across the life span.
Integrate prior and current learning concepts about diagnostics, dietetics, and pharmacology with nursing care.
Integrate, in collaboration with the RN, critical thinking skills with the nursing process for care of the adult across the life span with health problems.
Apply critical thinking when assess etiology and pathophysiology related to signs and symptoms and treatment modalities for adult patients across the life span.
Discuss principles of cultural competency to the nursing care of individuals across the life span.
Discuss cultural issues that influence family dynamics throughout the life span.
Compare and contrast appropriate teaching/learning strategies utilized with the adult patient.
Analyze the impact of psychosocial and cultural values and practices in caring for the adult patient across the life span.
Differentiate the modalities utilized in treating psychiatric disorder
Integrate critical thinking skills with the nursing process for care of the psychiatric patient with health

problems.
Explore the role of the practical nurse and members of the health team caring for clients with psychiatric disorders.
Apply critical thinking skills related to concepts of psychiatric health care.
Discuss principles of cultural competency related to the nursing care of individuals with psychiatric disorders.
Apply principles of cultural competency to the nursing care of individuals with psychiatric disorders.

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

NURS 172L

	Current	Proposed
Course Prefix:	NURS	
Course No.:	172L	
Credit Hours	4	
Course Title:	Fundamental Medical-Surgical Concepts II Laboratory	Adult Concepts II /Mental Health Laboratory
Abbreviated		Adult Concepts II/MH Lab

Prerequisites:

Current: NURS 101, NURS 112, NURS 106, NURS 106L, NURS 107, NURS 107L, NURS 105L

Proposed: NURS 101, NURS 106, NURS 106L, NURS 107, NURS 107L

Co-requisites:

Current: NURS 172, NURS 117, NURS 117L, NURS 118, NURS 118L, NURS 156, NURS 109, NURS 109L

Proposed: NURS 172, NURS 117, NURS 117L, NURS 156

Description for catalog:

Current: Course offers the clinical practicum to apply the related nursing theosry in medical surgical nursing using the nursing process to assist clients with more complex health care needs

Proposed: Application of clinical practicum to apply nursing theory in medical surgical nursing using the nursing process to assist clients with more complex health care needs. Incorporates fundamental knowledge of mental health and illness from a holistic perspective while providing experiences which focus on mental health

Requirement or listed choice for any program of study: Yes ☑ No ☐

Health Science Tech Cert, Practical Nurse

Justification:

See justification for the PN program modification.

Topical course outline, proposed:

Demonstrate skills within the clinical environment
Create a nursing care plan with the RN in the clinical setting
Utilize critical thinking in taking care of diverse clients with mental health needs
Demonstrate teaching with clients in both medical surgical nursing and mental health.

Student Learning Outcomes, current:

Utilize technology and resources to analyze patient information.
In collaboration with the RN, assume responsibility for the care of adult patient/client in settings across the health care continuum.
Collaborate with the multidisciplinary team to promote patient/client optimal wellness.
In collaboration with the RN, utilize the nursing process to analyze patient/client needs by developing nursing care maps.
Demonstrate ethical, legal and professional behavior.
Demonstrate cultural competency of individuals across the life span.
Demonstrate communication techniques to establish and guide therapeutic relationships.
In collaboration with the RN, creates a teaching plan for patient/client and family.
In collaboration with the RN, evaluates discharge needs of the patient/client.

Student Learning Outcomes, proposed:

Demonstrate skills within the clinical environment
Create a nursing care plan with the RN in the clinical setting
Utilize critical thinking in taking care of diverse clients with mental health needs
Demonstrate teaching with clients in both medical surgical nursing and mental health
Demonstrate theory/principles of communication and nurse patient relationship to psychiatric nursing care.
Differentiate the modalities utilized in treating psychiatric disorder
Integrate, in collaboration with the preceptor nurse, critical thinking skills with the nursing process for care of the psychiatric patient with health problems.
Explore the role of the practical nurse and members of the health team caring for clients with psychiatric disorders.
Apply critical thinking skills related to concepts of psychiatric health care.
Demonstrate principles of cultural competency related to the nursing care of individuals with psychiatric disorders.
Identify cultural issues that influence family dynamics with psychiatric disorders.
Utilize diagnostic classifications in collaboration with the preceptor nurse, in treatment planning.
Apply nursing process theory to the care of clients with psychiatric disorders.
Identify the scope and significance of issues and trends impacting psychiatric health care.
Explain the impact of legal, ethical, and cultural issues in the delivery of psychiatric care.

Essential Learning SLOs, proposed:

NA

Discussions with affected departments:

NA

Proposed by: Genell Stites Expected Implemention: Fall 2016

Course Deletions

NURS 105L Credit Hours 1

Type of Change Deletion
Course Title: PN IV Certification
Essential Learning Course: Yes ☐ No ☑
Requirement or listed choice for any program of study: Yes ☑ No ☐
Prerequisite for other course(s): Yes ☑ No ☐

Nurs 172, Nurs 172L, Nurs 117, Nurs 117L, Nurs 118, Nurs 118L, Nurs 156

Co-requisite for other course(s): Yes ☑ No ☐

Nurs 101, Nurs 106, Nurs 106L, Nurs 107, Nurs 107L, Nurs 112

Justification:

This will be included in the "Adult concepts 1 class.

Proposed by: Genell Stites Expected Implementation: Fall 2016

NURS 109 Credit Hours 2

Type of Change Deletion

Course Title: Introduction to Mental Health Nursing

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☑ No ☐

NURS 118L, NURS 109L, NURS 172, NURS 172L, NURS 117, NURS 117L, NURS 118

Justification:

This will be included as one class for Obstetrics and Pediactrics.

Proposed by: Genell Stites Expected Implementation: Fall 2016

NURS 109L Credit Hours 1

Type of Change Deletion

Course Title: Introduction to Mental Health Nursing Laboratory

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☑ No ☐

NURS 118L, NURS 109, NURS 172, NURS 172L, NURS 117, NURS 117L, NURS 118

Justification:

This will be included as one class for Obstetrics and Pediactrics.

Proposed by: Genell Stites Expected Implementation: Fall 2016

NURS 112 Credit Hours 2

Type of Change Deletion

Course Title: Basic Concepts of Pharmacology

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Prerequisite for other course(s): Yes ☑ No ☐

Nurs 172, Nurs 172L, Nurs 117, Nurs 117L, Nurs 118, Nurs 118L, Nurs 156

Co-requisite for other course(s): Yes ☑ No ☐

Nurs 101, Nurs 106, Nurs 106L, Nurs 107, Nurs 107L, Nurs 105L

Justification:

This will be included in the "Adult concepts 1 class.

Proposed by: Genell Stites Expected Implementation: Fall 2016

NURS 118 Credit Hours 2

Type of Change Deletion

Course Title: Nursing Care of Children

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☑ No ☐

NURS 109, NURS 109L, NURS 172, NURS 172L, NURS 117, NURS 117L, NURS 118L

Justification:

This will be included as one class for Obstetrics and Pediactrics.

Proposed by: Genell Stites Expected Implementation: Fall 2016

NURS 118 Credit Hours 1

Type of Change Deletion

Course Title: Nursing Care of Children Laboratory

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☑ No ☐

NURS 109, NURS 109L, NURS 172, NURS 172L, NURS 117, NURS 117L, NURS 118

Justification:

This will be included as one class for Obstetrics and Pediactrics.

Proposed by: Genell Stites Expected Implementation: Fall 2016

Program Modification

Practical Nursing: 1612

Degree Type: Tech Cert

Modified Program Name: PN

Revision to program sheet: Yes ☑ No ☐

Description of modification:

Add 4 credits in the fall and 7 credits in the spring. Add math as the students have a math calculation class. Combine some courses to move towards a concept based curriculum.

Justification:

The PN program is looking at increasing the number of pre-requisites needed to apply to the program. By increasing the number of credits in the pre-requisites students are able to be full-time. Previously the credits required in the first semester were 10 credits and the second semester were 7 credits. The proposed change would make both semesters 14 credits. This change will also help with sequencing of courses. Once accepted to the PN program they must take pharmacology in the first semester and often struggle with the math section because a prerequisite math class is not required. Math 113 would help students be prepared for this course. Adding the Pathophysiology course to the pre-requisites would help students in the Adult Health 1 & 2 class with understanding the concepts of the diseases. Faculty are often trying to teach the pathophysiology along with the course because this was not previously taught. The new prerequisites have always been required, but for the next step in the career ladder that the majority of the students finish eventually.

The other changes in the program are working toward a concept based nursing curriculum. We will be combining courses to allow students to have a greater understanding of one concept at a time and how all age groups and diseases are affected by that area/concept. This will increase their understanding of how to care for all patients with a compromised area and understand the patient holistically. It was noted when doing a curriculum review that many concepts were being taught in several courses and by combining these courses students would not be repeating the same concepts in a different course.

Revision to SLOs: Yes ☐ No ☑

Other changes: Yes ☑ No ☐

The admission requirements will increase by 11 creduts

Discussions with affected departments:

NA

Proposed by: Genell Stites

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

~~2017-2018~~ 2016-2017~~2015-2016 PP~~ETITION/PROGRAM SHEET

Degree: Technical Certificate

Program of Study: Practical Nurse

About This Degree . . .

This program is designed for students interested in becoming a Licensed Practical Nurse as an entry into the nursing career ladder program. Completion of the Practical Nurse Certificate allows students to progress onto the second year of the Associate of Applied Science in Nursing Degree or apply for advanced placement in the Bachelor of Science in Nursing Degree. The Practical Nursing program prepares the student to be a direct care giver in hospitals, long-term facilities, and ambulatory care-clinic settings.

The potential student must demonstrate college-level proficiency in reading and writing in order to be admitted to this program. This program has selective admission requirements and requirements may change from year to year. It is the student's responsibility to obtain the current admission requirements.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/career/whatmajor.html.

All CMU certificate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Function as a competent practical nurse within a legal and ethical framework to provide holistic care to patients from diverse backgrounds. (Applied Learning)
2. Promote a therapeutic environment supporting communication across the lifespan for vulnerable and diverse populations. (Communication Fluency)
3. Demonstrate clinical decision-making and critical thinking skills to provide effective nursing care for individuals throughout the development stages across the lifespan. (Specialized Knowledge, Applied Learning)
4. In collaborative manner, organize and incorporate assessment data to plan/revise patient care based on established nursing diagnoses, assessments, and evaluate data. (Critical Thinking)
5. Utilize knowledge of the nursing process, patient needs, and the role of the nurse when providing safe, effective, and individualize patient care, which respects values, culture, and expressed needs. (Specialized Knowledge)
6. Implement the nursing process, utilizing critical thinking by collecting patient data, identifying patient needs, reporting findings, and providing input into the plan of care. (Applied Learning)

NAME: _____ **STUDENT ID #:** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____ 20_____

Signature of Advisor Date

_____ _____ 20_____

Signature of Department Head Date

_____ _____ 20_____

Signature of Registrar Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration. See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

DEGREE REQUIREMENTS:

- 2.00 cumulative GPA or higher in all CMU coursework
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- 2.00 GPA or higher in all Essential Learning, prerequisite and nursing courses. Program sheets are for advising purposes only. Because a program may have requirements specific to the degree, check with your advisor for additional guidelines, including prerequisites, grade point averages, grades, exit examinations, and other expectations. It is the student's responsibility to be aware of, and follow, all guidelines for the degree being pursued. Any exceptions or substitutions must be approved by the faculty advisor and/or Department Head.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.

ESSENTIAL LEARNING REQUIREMENTS (9 Semester Hours)
See the current catalog for a list of courses that fulfill the requirements below. If a course is on the Essential Learning list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the Essential Learning requirement.

Course No	Title	Sem.hrs	Grade	Term/Trns

Communication (6 semester hours, must receive a grade of "C" or better and must be completed or in the process of completion by March 1 application deadline. "Late start" or "second module" classes beginning after March 1 deadline do not count toward Essential Learning classes.)

ENGL 111	English Composition	3	_____	_____
ENGL 112*	English Composition	3	_____	_____

History, Humanities, Social and Behavioral Sciences, Fine Arts, Natural Sciences, Mathematics, or selected Applied Studies+ Courses (3 semester hours)

**PSYC 233	Human Growth & Development	3	_____	_____
PSYC 150	General Psychology	3		

MATH (4 semester hours)

Math 113	College Algebra	4		

PREREQUISITES (128 Semester Hours)

*Required by this program
**This course is counted with the Essential Learning courses, but is a prerequisite for the L.P.N. in Nursing program.
+ Choose from HSCI 101, SPCH 101, SPCH 102

BIOL 209 Human Anat & Physiology I 3

Course No	Title	Sem hrs	Grade	Term/Trns
BIOL 209	Human Anat & Physiology I	3	_____	_____
BIOL 209L	Human Anat & Physiology I Lab	1	_____	_____
BIOL 210	Human Anat & Physiology II	3	_____	_____
BIOL 210L	Human Anat & Physiology II Lab	1	_____	_____
BIOL 241	Pathophysiology	4	_____	_____

TECHNICAL CERTIFICATE IN PRACTICAL NURSING COURSE REQUIREMENTS (310 Semester Hours)

NURS					
NURS	101	Pharmacology Calculations	1	_____	_____
NURS	1061	PN IV Certification	51	_____	_____
NURS	05L	Fund Med Surg Adult Concepts I	23	_____	_____
NURS	106L	Adult Fund Med Surg Concepts I Lab	32	_____	_____
NURS	106L	Foundations of Nursing	3	_____	_____
NURS	107	Foundations of Nursing Lab	2	_____	_____
NURS	107L	Introduction to Mental Health	42	_____	_____
	109	Introduction to Mental Health	21		
NURS	109L	Lab	1	_____	_____
		Basic Concepts of Pharmacology	52	_____	_____
	112	Nursing Care of Childbearing Family	42	_____	_____
	117	Obstetrics/Pediatrics	1	_____	_____
	117L	Nursing Care of Childbearing			
	156	FamilObstetrics/Pediatrics y	2	_____	_____
	118	Lab	1	_____	_____
	118L	Nursing Care of Children	1	_____	_____
	156	Nursing Care of Children Lab	3	_____	_____
	172	Socialization into Practical Nurs	4	_____	_____

SUGGESTED COURSE SEQUENCING FOR THE PRACTICAL NURSING TECHNICAL CERTIFICATE

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FIRST YEAR

First Semester		Hours
ENGL 111	English Composition	3
BIOL 209*	Human Anatomy and Physiology I	3
BIOL 209L*	Human Anatomy and Physiology I Lab	1
~~PSYC 233**~~	~~Human Growth & Development~~	~~3~~
MATH 113	College Algebra	4
PSYC 150	General Psychology	3
		***14~~0~~

Second Semester		Hours
ENGL 112	English Composition	3
BIOL 210*	Human Anatomy and Physiology II	3
BIOL 210L*	Human Anatomy and Physiology II Lab	1
PSYC 233**	Human Growth & Development	3
BIOL~~iol~~ 241	Pathophysiology	4

***14~~7~~

***BIOL 209/209L and BIOL 210/210L must have been completed within five years prior to applying to the nursing program.**
****This course is counted with the Essential Learning courses, but is a prerequisite for the Licensed Practical Nursing program.**
*****Students desiring to progress ~~onto~~ through the nursing career ladder ~~LPN- Bachelor of Science Associate of Applied Science or Bachelor of Science in Nursing~~ should check with their advisor to develop a full time schedule of Essential Learning and program requirements during this first year.**

SECOND YEAR

Third Semester		Hours
NURS 101	Pharmacology Calculations	1
~~NURS 105~~	~~PN IV Certification~~	~~1~~
NURS 106	~~Fund Med Surg~~ Adult Concepts I/ Pharmacology	5~~3~~
NURS 106L	~~Fund Med Surg~~ Adult Concepts I Lab	2
NURS 107	Foundations of Nursing	3
NURS 107L	Foundations of Nursing Lab	3~~2~~
~~NURS 112~~	~~Basic Concepts of Pharmacology~~	~~2~~
		14

Fourth Semester		Hours
~~NURS 109~~	~~Introduction to Mental Health~~	~~2~~
~~NURS 109L~~	~~Introduction to Mental Health Lab~~	~~1~~
NURS 117	Obstetrics/Pediatrics~~Nursing Care of Childbearing Family~~	4~~2~~
NURS 117L	~~Nursing Care of Childbearing Family~~Obstetrics/Pediatrics Lab	2~~1~~
~~NURS 118~~	~~Nursing Care of Children~~	~~2~~
~~NURS 118L~~	~~Nursing Care of Children Lab~~	~~1~~
NURS 156	Socialization into Practical Nursing	1
NURS 172	Adult ~~Fund Med Surg~~ Concepts II/Mental Health	5~~3~~
NURS 172L	~~Fund Med Surg~~ Adult Concepts II/ Mental Health Lab	4
		16~~7~~

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.

3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: During your final year, you will be required to take a capstone exit assessment/project (e.g,, Major Field Achievement Test).

Department: Music

Program Additions

Minor, Jazz Studies

Degree Type:

Abbreviated Name: Jazz Studies

Proposed by: Darin Kamstra

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

Course Additions

MUSA 267 Credit Hours 3

Course Title: Jazz History and Literature

Abbreviated Title: Jazz History and Lit.

Contact hours per week: Lecture 3 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 2250 Student preparation minutes: 4500

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☑ No ☐

Category: Fine Arts

EL SLO: Produce effective arguments and summaries in written English Select and use appropriate information or techniques in an academic project

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☐ No ☑

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Survey of prominent artists, innovators, and stylistic trends in jazz from its origins to the contemporary.

Justification:

The addition of this course rounds out the curriculum for the proposed Music Minor in Jazz Studies. The course will provide students in the minor with a historical perspective for their work in the jazz performance field. The course will also provide an additional Fine Arts Essential Learning option for students across campus who would like to learn more about this important American art form.

Topical course outline:

Origins
Early Jazz: New Orleans and Chicago
Big Bands and Swing
Be-bop
Latin Influences
Post Bop
Fusion
Contemporary Trends

Student Learning Outcomes:

Explain the origins of jazz
List the prominent artists and innovators of jazz and describe their most notable contributions
Compare and contrast the primary stylistic trends in jazz

Discussions with affected departments:

NA

Instructions to Registrar:

None

Proposed by: Dr. Darin Kamstra Expected Implementation: Fall 2016

JAZZ HISTORY AND LITERATURE
PROPOSED PROJECTS FOR EVALUATING ESSENTIAL LEARNING OUTCOMES

Produce effective arguments and summaries in written English

All sections of Jazz History and Literature will require students to complete a paper comparing and contrasting two prominent jazz solo artists or ensembles.

Select and use appropriate information or techniques in an academic project

Students writing a paper comparing and contrasting two prominent jazz soloists or ensembles in the Jazz History and Literature course will select scholarly sources and recordings that illustrate their arguments. Students will also present their findings to the class in an oral presentation.

MUSL 139 Credit Hours 1 or 2

Course Title: Jazz

Abbreviated Title: Jazz

Contact hours per week: Lecture Lab Field Studio Other .5 or 1

Type of Instructional Activity: Music-Private Lessons

Academic engagement minutes: 375 or 7 Student preparation minutes: 1825 or

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Music Minor, Music - Jazz Studies

Overlapping content with present courses offered on campus: Yes ☐ No ☐

Additional faculty FTE required: Yes ☐ No ☐

Additional equipment required: Yes ☐ No ☐

Additional lab facilities required: Yes ☐ No ☐

Course description for catalog:

NA-Applied Music Lession share a single Catalog description. See related memo from Department of Music.

Justification:

The addition of this course provides critical individual instruction for students in the proposed Music Minor in Jazz Studies. The course will provide students in the minor weekly guidance on performance of their instrument in the jazz idiom, including jazz improvisation skills that are vital to success as a jazz musician.

Topical course outline:

Jazz Style and Articulation Application of Improvisation to Selected Jazz Heads Melodic Embellishment Comping (rhythm section instruments)

Student Learning Outcomes:

Perform and embellish melodies in a jazz style Perform accompaniments in a jazz style (rhythm section instruments) Improvise over the chord progressions to selected jazz heads

Discussions with affected departments:

NA

Proposed by: Expected Implementation: Fall 2016

MUSL 239 Credit Hours 1 or 2

Course Title: Jazz

Abbreviated Title: Jazz

Contact hours per week: Lecture Lab Field Studio Other .5 or 1

Type of Instructional Activity: Music-Private Lessons

Academic engagement minutes: 375 or 7 Student preparation minutes: 1825 or

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Music Minor, Music - Jazz Studies

Overlapping content with present courses offered on campus: Yes ☐ No ☐

Additional faculty FTE required: Yes ☐ No ☐

Additional equipment required: Yes ☐ No ☐

Additional lab facilities required: Yes ☐ No ☐

Course description for catalog:

NA-Applied Music Lession share a single Catalog description. See related memo from Department of Music.

Justification:

See justification for MUSL 139 course addition proposal.

Topical course outline:

Jazz Style and Articulation Application of Improvisation to Selected Jazz Heads Melodic Embellishment Comping (rhythm section instruments)

Student Learning Outcomes:

Perform and embellish melodies in a jazz style Perform accompaniments in a jazz style (rhythm section instruments) Improvise over the chord progressions to selected jazz heads

Discussions with affected departments:

NA

Proposed by: Expected Implementation: Fall 2016

MUSL 339 Credit Hours 1 or 2

Course Title: Jazz

Abbreviated Title: Jazz

Contact hours per week: Lecture Lab Field Studio Other .5 or 1

Type of Instructional Activity: Music-Private Lessons

Academic engagement minutes: 375 or 7 Student preparation minutes: 1825 or

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

Music Minor, Music - Jazz Studies

Overlapping content with present courses offered on campus: Yes ☐ No ☐

Additional faculty FTE required: Yes ☐ No ☐

Additional equipment required: Yes ☐ No ☐

Additional lab facilities required: Yes ☐ No ☐

Course description for catalog:

NA-Applied Music Lession share a single Catalog description. See related memo from Department of Music.

Justification:

See justification for MUSL 139 course addition proposal.

Topical course outline:

Jazz Style and Articulation Application of Improvisation to Selected Jazz Heads Melodic Embellishment Comping (rhythm section instruments)

Student Learning Outcomes:

Perform and embellish melodies in a jazz style Perform accompaniments in a jazz style (rhythm section instruments) Improvise over the chord progressions to selected jazz heads

Discussions with affected departments:

NA

Proposed by: Expected Implementation: Fall 2016

MUSL 439 Credit Hours 1 or 2

Course Title: Jazz

Abbreviated Title: Jazz

Contact hours per week: Lecture Lab Field Studio Other .5 or 1

Type of Instructional Activity: Music-Private Lessons

Academic engagement minutes: 375 or 7 Student preparation minutes: 1825 or

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

EL SLO: ⍰

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☐ No ☐

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☐ No ☑

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

NA-Applied Music Lession share a single Catalog description. See related memo from Department of Music.

Justification:

See justification for MUSL 139 course addition proposal.

Students will only be required to take lessons through the 300 level for the proposed jazz studies minor; however, they could take more lessons as electives for their major. All existing music lessons in the catalog, as well as the proposed jazz lessons, can be repeated once for credit (students generally take 2 semesters at the 100 level, 2 semesters at the 200 level, etc.). Therefore, even though MUSL 439 is not required for the proposed minor, it should be created to maintain consistency with other lessons in the catalog and to allow for students to take lessons as an elective at the 400 level.

Topical course outline:

Jazz Style and Articulation
Application of Improvisation to Selected Jazz Heads
Melodic Embellishment
Comping (rhythm section instruments)

Student Learning Outcomes:

Perform and embellish melodies in a jazz style
Perform accompaniments in a jazz style (rhythm section instruments)
Improvise over the chord progressions to selected jazz heads

Discussions with affected departments:

NA

Instructions to Registrar:

None

Proposed by: Dr. Darin Kamstra Expected Implementation: Fall 2016

UCC_Chair

From: UCC_Chair
Sent: Thursday, January 21, 2016 1:50 PM
To: UCC_Chair
Subject: Course Catalog Description for MUSL - Applied Music Lessons

To the Undergraduate Curriculum Committee:

The following course catalog description, as approved by the department and catalog description reviewer, will appear in the catalog as a single description for all Applied Music Lessons (MUSL) entries, beginning with the 2016-17 Catalog:

> Development of individual music performance skills through weekly lessons. Available to all students and may be used as an elective choice to students concurrently enrolled in a MUSP course. Lessons may be taken twice at each level. Music majors are required to attend and perform at weekly recitals as a component of applied music lessons. An instructional fee is required.

From: Hawkins, Jeremy
Sent: Tuesday, January 19, 2016 3:07 PM
To: UCC_Chair <UCC_Chair@coloradomesa.edu>
Subject: FW: Lesson descriptions for course catalogue

Please add the following memo to the agenda for January's meeting.

Jeremy

Jeremy Hawkins, PhD, ATC
Assistant Professor
Athletic Training Program Director
Colorado Mesa University
970-248-1374

From: Hofer, Calvin
Sent: Tuesday, January 19, 2016 2:25 PM
To: Hawkins, Jeremy <jrhawkins@coloradomesa.edu>
Subject: Lesson descriptions for course catalogue

Hi Jeremy,

I received your phone call and understand that the description for all lessons (MUSL) does not appear in the catalogue. As Dr. Kamstra mentioned, this was an oversight that was discovered in the submission process for lessons in jazz improvisation.

I request and approve that the descriptions for all lessons be placed back in the catalogue. Thank you,

Dr. Calvin Hofer, Head
Department of Music
Director of Bands
Colorado Mesa University
chofer@coloradomesa.edu

Department: WCCC (Transportation)

Program Additions

Tech Cert, Transportation Services Technology, Automotive Service Technician Specialization

Degree Type: Technical Certificate

Abbreviated Name: Automotive Service Technician

Proposed by: Gary Looft

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

2015-16 DEPARTMENT WORKSHEET FOR PROGRAM ADDITION
Colorado Mesa University Curriculum Committees

NOTE: All related course changes must be submitted on separate forms.

a. Identifying information

Department: **WCCC**
If new department, please enter name:

Program: Degree type: **Technical Cert**
Program/concentration Name: **Transportation Services Technology, Automotive Service Technician Specialization**

Abbreviated program/concentration (max 30 characters): **Automotive Service Technician**

PROPOSED AND PREPARED BY:
Name: **Gary Looft** Date: **11/19/2015**
Email: **glooft@coloradomesa.edu** Phone: **970-255-2612**

Additional required information for each proposal for a program addition: (see Section IV.F of Curriculum Manual)

1. Complete items **b** through **m** on the following pages.

2. Complete the three CDHE tables at the end of this document. These tables MUST be included for all new program proposals. If any of the fields do not apply, please enter NA or other explanation.

3. Discuss the proposal with all departments affected by the program.
   Enter NA or dates/outcomes of such discussions

4. Submit complete program sheet. The most up-to-date program sheet templates are available as Word documents at R:\Curriculum\Program Sheets for Curriculum Program Modifications.

5. Submit this completed form to the Library's Curriculum Committee representative and the Director of Financial Aid a week prior to the published proposal submission deadline.

6. Obtain departmental approval according to department-specific procedures.

Implementation Deadlines
Program additions and modifications approved at the September-February curriculum meetings are generally implemented the following academic year. See Section II.D of the Curriculum Manual. Exceptions are rare and granted only in extenuating circumstances. To request a different effective date, the academic department head should contact the curriculum committee chair. (Note: in the approval process only the VPAA will ultimately approve or deny the request.)

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Glen Hoff** Date: **11/19/2015**

APPROVED BY DEPARTMENT HEAD:
Name: **Christine Murphy** Date: **11/23/15**

APPROVED BY DIRECTOR OF TEACHER EDUCATION (REQUIRED FOR TEACHING PROGRAMS)
Name: Date:

b. Demonstration of compliance with CMU requirements related to student learning outcomes (SLOs):

1) Identify program student learning outcomes (SLOs)
2) Identify linkage of program SLOs to institutional SLOs
3) Illustrate relationship of SLOs to proposed curriculum using curriculum map format
4) Identify planned assessments for the program SLO.

- Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (communication)
- Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (computational)
- Evaluate evidence discovered during the diagnosis/troubleshooting of vehicles and apply those findings to strategies to properly repair the vehicle (critical thinking)
- Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (specialized knowledge)
- Demonstrate personal and professional ethical behavior as applied to the Transportation Services industry. (specialized Knowledge)
- Demonstrate mastery of the current terminology in the Transportation Service industry (applied learning)
- Generate substantially error-free products or processes that define the duties of a repair technician (applied learning)
- Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence.(applied learning)

c. Program goals as they pertain to Colorado Mesa University's goals and objectives and Colorado Mesa University's Role and Mission.

There is hereby established a university at Grand Junction, to be known as Colorado Mesa University, which shall be a general baccalaureate and graduate institution with selective admission standards. Colorado Mesa University shall offer liberal arts and sciences, professional, and technical degree programs and a limited number of graduate programs. Colorado Mesa University shall also maintain a community college role and mission, including career and technical education programs. Colorado Mesa University shall receive resident credit for two-year course offerings in its commission-approved service area. Colorado Mesa University shall also serve as a regional education provider.

This program fulfills the career and technical program portion of the role and mission

d. Program strengths, special features, innovations, and/or unique elements.

---

1. Meets the 2013 NATEF standards
2. Allows the Light Duty Repair Technician the opportunity to advance the next level of technician competence.
3. Prepares the student for transition into the Advanced Automotive Technician program

e. External agencies, such as program accreditations, professional associations, as well as licensing requirements that have helped shape the program's curriculum (i.e., effects such as length of the program, on program content or mode of delivery, etc.). Do faculty members anticipate seeking program accreditation at appropriate date?

National Automotive Technician Education Foundation (NATEF)

f. Program admissions requirements (if any beyond admission to institution).

g. Rationale and justification for the program demonstrating the demand, as evidenced by:

(1) Employer need/demand as demonstrated by evidence such as:

(a) identification of several potential employers of program graduates;

(b) projected regional and/or statewide need for graduates from current labor market analyses and/or future workforce projections/studies (potential source: www.occsupplydemand.org/)

(c) surveys made by external agencies;

(d) letters of direct employer support may be used. Include letters indicating the availability of positions for graduates of the proposed programs, signed by individual in a senior position of authority.Page 27 of 41

(2) Student demand as demonstrated by evidence such as surveys of potential students to answer the question: “what is the student population served by program implementation?”

Western Slope Auto
Fuoco Motors
Bozarth/Miller Motors
McCandless Trucking
PDF Automotive
Firestone Tires
Sears Auto Center

The growth of jobs in Colorado for the next seven years is 20%, or about 700 jobs per year. The average wage is 18.00-24.50/Hr. ONet.com

h. Relationship of the proposed program to existing programs on campus and to similar programs within the state, with a rationale reflecting that proposed program demand cannot be met by another program (i.e., program implementation is not an unnecessary duplication)

.
There are no programs in western Colorado offering this certificate

i. Curriculum, including identification of new courses and the numbers, names, and sequencing of all courses, as well as demonstration of compliance with CMU's Credit Hour Policy as required by the U.S. Department of Education and articulated by the Higher Learning Commission;

j. List of faculty and their qualifications. (Is there a need for additional faculty?)

Gary Looft, Technical Instructor, ASE Master Certified in Auto, Diesel, and Machinist as well as: Advanced L1,L2,L3,G1, F1
Eric Keith Wright, Assistant Technical Professor, ASE Master Certified Auto, as well as: Advanced L1, G1, C1

k. Description of learning resources needed for implementation. Scope and quality of library holdings, laboratories, clinical facilities, and technological support as applicable. Department's recommendations for additions to the Library's collection.

No Additional resources needed

l. Intended delivery mode for program. For programs delivering any of its coursework via 1) alternative formats, 2) outsourcing, and/or 3) a consortial relationship, the program proposal must demonstrate compliance with requirements as specified by the U.S. Department of Education and articulated in the Higher Learning Commission's policies. To demonstrate this compliance, the proposing department must submit a statement from the VPAA's office.

Lecture/Lab vocational format

m. For Professional, Technical or Other Programs, the justification must include:

(1) Rationale for program to be in the PTO category.
(2) Statement as to how the curriculum aligns to the requirements or recommendations of the nationally recognized accrediting, licensing, certifying or professional organization.
(3) Rationale for the program to exceed 60 credit hours, if applicable.
(4) Rationale for prescribing Applied Studies courses, if applicable.
(5) Explanation as to how a transfer student with an AA degree in the discipline of that program can graduate by completing only an additional 60 hours.

This program meets the criteria for PTO status

TABLE 1: ENROLLMENT PROJECTIONS

Name of Program: Transportation Services Technology

Degree Title _ Automotive Service Technician _____

Name of Institution: __WCCC_____

DEFINITIONS:

Academic year is the period beginning July 1 and concluding June 30.

Headcount projections represent an unduplicated count of those students officially admitted to the program and enrolled at the institution during the academic year.

FTE is defined as the full-time equivalent number of those students majoring in the program, regardless of the classes enrolled, during the academic year.

Program graduate is defined as a student who finishes all academic program requirements and graduates with a formal award within a particular academic year.

SPECIAL NOTES:

To calculate the annual headcount enrollment, add new enrollees to the previous year headcount and subtract the number who graduated in the preceding year. Adjust by the anticipated attrition rate.

To calculate FTE, multiply the number of students times the projected number of credit hours degree seeking students will be typically enrolled in per year and divide by 30.

The data in each column is the annual **unduplicated** number of declared program majors. Since this table documents program demand, course enrollments are not relevant and shall not be included in the headcount or FTE data.

		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Full Implementation
1-a	In-state Headcount	12	12	12	12	12	
1-b	Out-of-State Headcount	4	6	6	6	6	
2	Program Headcount	16	18	18	18	18	
3-a	In-state FTE						
3-b	Out-of-State FTE						
4	Program FTE						
5	Program Graduates	0	16	18	18	18	

_____ _____

Signature of Governing Board Officer Date

TABLE 2: PHYSICAL CAPACITY ESTIMATES

Name of Program: Transportation Services Technology
Name of Institution: WCCC
Purpose: This table documents the physical capacity of the institution to offer the program and/or the plan for achieving the capacity. Complete A or B.

Part A

I certify that this proposed degree program can be fully implemented and accommodate the enrollment projections provided in this proposal without requiring additional space or renovating existing space during the first five years.

_____ _____
Governing Board Capital Construction Officer Date

Part B

	Column 1	Column 2	Column 3		Column 4		Column 5	Column 6
ASSIGNABLE SQUARE FEET	TOTAL NEEDED	AVAILABLE	RENOVATION		NEW CONSTRUCTION		LEASE/ RENT	REVENUE SOURCE*
TYPE OF SPACE	NA		Immed	Future	Immed	Future		
Classroom	NA							
Instructional Lab	NA							
Offices	NA							
Study								
Special/ General Use								
Other								
TOTAL	NA							

* Capital Construction Fund (CCF), Research Building Revolving Fund (RBRF), Gift (GIFT), Grant (GR), Auxiliary Fund (AUX)

Attach a narrative describing the institutional contingency plan that addresses the space requirements of the proposed program or alternative delivery options, in the event that the request for capital construction or renovation is not approved.

_____ _____
Governing Board Capital Construction Officer Date

Approved Policy I-B-10 June 5, 2003

TABLE 3 – PROJECTED EXPENSE AND REVENUE ESTIMATES

All cost and revenue projections should be in constant dollars (do not include an inflation factor).

		ESTIMATED AMOUNT IN DOLLARS (PV)				
		Year 1	Year 2	Year 3	Year 4	Year 5
Operating Expenses:						
1	Faculty	none	none	none	none	none
2	Financial Aid specific to program					
3	Instructional Materials					
4	Program Administration					
5	Rent/Lease					
6	Other Operating Costs					
7	Total Operating Expenses					
Program Start-Up Expenses		0	0	0	0	0
8	Capital Construction					
0	Equipment Acquisitions					
10	Library Acquisitions					
11	Total Program Start-Up Exp.					
TOTAL PROGRAM EXPENSES		0	0	0	0	0
Enrollment Revenue						
12	General Fund: State Support					
13	Cash Revenue: Tuition					
14	Cash Revenue: Fees					
Other Revenue						
15	Federal Grants					
16	Corporate Grants/Donations					
17	Other fund sources *					
18	Institutional Reallocation **					
TOTAL PROGRAM REVENUE						

** If revenues are projected in this line, please attach an explanation of the specific source of the funds. If reallocated, the specific departments and the impact the dollars will have on the departments that will provide the reallocated dollars.

_____ _____ _____

Signature of Governing Board Financial Officer Title Date

Approved Policy I-B-12 June 5, 2003

Curriculum Map for Transportation Services Technology

	COMMUNICATION	QUANTATATIVE	CRITICAL THINKING	SPECIALIZED KNOWLEDGE	APPLIED KNOWLEDGE
TSTC 100 Intro to Transportation Service	x	x		x	x
TSTC 101 Vehicle service and Inspection	x	x	x	x	x
TSTC 130 Electrical I		x	x	x	x
TSTC 160 Electrical II		x	x	x	x
TSTC 170 Chassis Fundamentals		x	x	x	x
TSTC 171 Brakes I		x	x	x	x
TSTG 115 Gas Engine Reconditioning	x	x	x	x	x
TSTG 120 Industrial Safety Practices	x	x	x	x	
TSTG 135 Starting and Charging Systems		x	x	x	x
TSTG 195 Climate Control	x	x	x	x	x
TSTG 220 Workplace Skills		x	x	x	x
TSTG 240 Job Shop	x	x	x	x	x
TSTG 270 Practrical Applications	x	x	x	x	x
TSTA 245 Manual Drive Trains		x	x	x	x
TSTA 247 Automatic Drive Trains	x	x	x	x	x
TSTA 265 Engine Control Service		x	x	x	x
TSTA 267 Body Controls	x	x	x	x	x
TSTA 275 Alignment and Suspension Service		x	x	x	x
TSTA 286 Hybrid Vehicles	x	x	x	x	x
TSTA 287 Engine Performance and Emissions	x	x	x	x	x
TSTA 289 Alternative Fueled Vehicles	x	x	x	x	x
TSTD 177 Air Brakes		x	x	x	x
TSTD 215 Diesel Engine Reconditioing		x	x	x	x
TSTD 265 Electronic Diesel Engine Controls		x	x	x	x

2016-2017 PETITION/PROGRAM SHEET
Award: Technical Certificate
Program of Study: Transportation Services Technology
Specialization: Automotive Service Technician

About This Certificate . . .

Students learn the fundamentals of electronics, starters, ignition, and charging systems,; air conditioning, cooling and heating systems,; safety,; technical math,; use of technical manuals; basic management skills,; written and oral communication skills,; and leadership. Advanced coursework includes an in-depth study of internal combustion engine disassembly, repair, reassembly, diagnosis and troubleshooting; suspension systems; and alignment and wheel balance. Career options include automotive/diesel technician, parts and service distributor, industrial sales representative and service manager.
For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.html.

All CMU certificate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service
   Excellence standard. (Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis and troubleshooting of vehicles and apply those finding to strategies to properly repair the vehicle. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
5. Demonstrate mastery of the current terminology in the Transportation Service industry and generate substantially error-free products or processes that define the duties of a repair technician.(Specialized Knowledge)
6. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
7. Demonstrate personal and professional ethical behavior as applied to the industry. (Applied Learning)

NAME: _____ **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ ( ) _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____
Signature of Advisor Date

_____ _____ 20____
Signature of Department Head Date

_____ _____ 20____
Signature of Registrar Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration. See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information

DEGREE REQUIREMENTS:

- 2.00 cumulative GPA or higher in all coursework
- 2.00 cumulative GPA or higher in coursework toward the major content area
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.

Required Courses (42 semester hours)

Course No	Title	Sem. Hrs	Grade	Term
Completion of Light Duty Tech Certificate		27		
TSTG 220	Workplace Skills	3	____	_____
TSTA 245	Manual Drive Trains OR			
TSTA 247	Automatic Drive Trains	3	____	_____
TSTG 275	ABS/Diagnostics	2	____	_____
TSTA 275	Alignment & Suspension Service	3	____	_____
TSTA 265	Engine Control Service	3	____	_____

SUGGESTED COURSE SEQUENCING FOR A TECHNICAL CERTIFICATE IN TRANSPORTATION SERVICES TECHNOLOGY, AUTOMOTIVE SERVICE TECHNICIAN

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

First Semester		Hours
TSTC 100	Intro to Transportation Services	2
TSTC 170	Chassis Fundamentals	2
MATH 107	Career Mathematics	3
TSTG 120	Industrial Safety Practices	2
TSTC 171	Brakes I	2
TSTG 175	Brakes II	2
		13

Second Semester		Hours
TSTC 130	Electrical I	2
TSTC 160	Electrical II	2
TSTC 101	Maintenance and Inspection	3
CADT 101	Computer Applications	1
TSTD/G	Restricted Electives	6
		14

Third Semester		Hours
TSTG 220	Workplace Skills	3
TSTA 245	Manual Drive Trains OR	
TSTA 247	Automatic Drive Trains	4
TSTG 275	ABS/Diagnostics	2
TSTA 275	Alignment and Suspension Service	3
TSTA 265	Engine Control Service	3
		15

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).
6. NOTE: Students should consult the Financial Aid Office for eligibility requirements for undergraduate and graduate certificates.

Course Additions

TSTA 286 Credit Hours 2

Course Title: Hybrid Vehicles

Abbreviated Title: Hybrid Vehicles

Contact hours per week: Lecture Lab Field Studio Other 3

Type of Instructional Activity: Lecture/Laboratory: Vocational/Technical

Academic engagement minutes: 2250 Student preparation minutes: 2250

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

TSTC 100, TSTC 130, TSTC 160

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341
WCCC AAS, Transportation Services-Diesel Tech: 1342
WCCC Tech Cert, Transportation Services-Automotive Service: 1346
WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☐ No ☑

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Introduction to hybrid technology in the transportation industry including: power and transmission designs, batteries, plug-in technology, control systems, safety, associated systems, diagnostics and repair of the modern hybrid vehicle.

Justification:

ASE and NATEF have split the alternative fueled area into Alternative Fuel and Hybrids requiring an addition of a hybrid course and modifing the exsisting Alternative Fuels course

Topical course outline:

1. Introduction to electric vehicles
2. Electrical theory review
3. Motors and generators
4. Batteries
5. Basics of battery powered vehicles
6. Series hybrids
7. Parallel hybrids
8. Assist hybrids
9. Power split full hybrids
10. Maintenance and service
11. Hybrid safety

Student Learning Outcomes:

1. safely access the safety switch and deactivate the electric drive

2. define the different drive mechanisms
3. perform a required maintenance schedule
4. define D/C - A/C motor operation
5. define a step-up and step-down transformation
6. measure available voltage and demand
7. evaluate a battery for condition and usability

Discussions with affected departments:

N/A

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTG 275 Credit Hours 2

Course Title: ABS Diagnostics

Abbreviated Title: ABS Diagnostics

Contact hours per week: Lecture Lab Field Studio Other 3

Type of Instructional Activity: Lecture/Laboratory: Vocational/Technical

Academic engagement minutes: 2250 Student preparation minutes: 2250

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

TSTC 100, TSTC 130, TSTC 160, TSTC 171, TSTG 175

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☐ No ☑

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Introduction to anti-lock brake systems to include: ABS types and operation, diagnostics, traction control, stability control, regerative braking and active braking systems

Justification:

NATEF has separated the ABS from the normal brake systems requiring a course addition and modification of TSTC 171 and TSTG 175.

Topical course outline:

1. ABS types
2. ABS terms and operation
3.Components
4. diagnostics
5. traction control
6. stability control
7. regenerative braking

Student Learning Outcomes:

1. identify ABS components
2. define operational parameters
3. perform a required diagnostic check
4. define traction control
5. define stability control
6. define regenerative braking
7. evaluate proper operation of the ABS system

Discussions with affected departments:

N/A

Proposed by: Gary Looft Expected Implementation: Fall 2016

Course Modifications

TSTA 265

	Current	Proposed
Course Prefix:	TSTA	
Course No.:	265	
Credit Hours	2	3
Course Title:	Engine Control Service	
Contact	Lecture	Lecture
	Lab	Lab
	Field	Field
	Studio	Studio
	Other 3	Other 4.5
Engage Min.:	2250	3375
Prep Min.:	2250	3375

Prerequisites:

Current: None

Proposed: TSTC 100, TSTC 101, TSTC 130, TSTC 160

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF accreditation has added more depth to the repair tasks, requiring additional credit hrs to accomplish

Topical course outline, current:

1. fuel injection systems
2. inputs and outputs
3. on-board diagnostics
4. O2 sensors and fuel trim
5. engine condition diagnosis
6. intake and exhaust sysems

Topical course outline, proposed:

1. fuel injection systems
2. inputs and outputs
3. on-board diagnostics
4. O2 sensors and fuel trim
5. engine condition diagnosis
6. variable plane intake and exhaust sysems
7. wide-band and air-fuel ratio sensors
8. direct injection
9. electrocnic throttle control
10. networks and engine control
11. fuel pumps
12 turbocharging or supercharging.

Student Learning Outcomes, current:

1. identify fuel injection systems
2. test fuel injector fuel trim
3. identify performance parameters
4. define OBD II and it's components
5. retreive and interpret OBD II codes

Student Learning Outcomes, proposed:

1. identify fuel injection systems
2. test fuel injector fuel trim
3. identify performance parameters
4. define OBD II and it's components
5. retreive and interpret OBD II codes
6. define direct gas fuel injection
7. define and interpret air/fuel ratio sensor data
8. inspect, test and interpret fuel delivery parameters
9. troubleshoot variable plane intakes and throttle-by-wire systems

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTA 267

	Current	Proposed
Course Prefix:	TSTA	
Course No.:	267	
Credit Hours	2	3
Course Title:	Body And Chassis Controls	Body Controls
Abbreviated	Body and Chassis Cn	Body Controls
Contact	Lecture	Lecture
	Lab	Lab
	Field	Field
	Studio	Studio
	Other 3	Other 4.5
Engage Min.:	2250	3375
Prep Min.:	2250	3375

Prerequisites:

Current: None

Proposed: TSTC 100, TSTC 130, TSTC 160

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF accreditation has added more depth to the repair tasks, requiring additional credit hrs to accomplish

Topical course outline, current:

1. fuel injection systems
2. inputs and outputs
3. on-board diagnostics
4. O2 sensors and fuel trim

5. engine condition diagnosis
6. intake and exhaust sysems

Topical course outline, proposed:

1. fuel injection systems
2. inputs and outputs
3. on-board diagnostics
4. O2 sensors and fuel trim
5. engine condition diagnosis
6. variable plane intake and exhaust sysems
7. wide-band and air-fuel ratio sensors
8. direct injection
9. electronic throttle control
10.networks and engine control
11.fuel pumps
12 turbocharging or supercharging.

Student Learning Outcomes, current:

1. identify fuel injection systems
2. test fuel injector fuel trim
3. identify performance parameters
4. define OBD II and it's components
5. retreive and interpret OBD II codes

Student Learning Outcomes, proposed:

1. identify fuel injection systems
2. test fuel injector fuel trim
3. identify performance parameters
4. define OBD II and it's components
5. retreive and interpret OBD II codes
6. define direct gas fuel injection
7. define and interpret air/fuel ratio sensor data
8. inspect, test and interpret fuel delivery parameters
9. troubleshoot variable pane intakes and throttle-by-wire systems

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTA 287

	Current	**Proposed**
Course Prefix:	TSTA	
Course No.:	287	
Credit Hours	2	3
Course Title:	Engine Performance and Emissions	
		4.5
Engage Min.:	2250	3375
Prep Min.:	2250	3375

Prerequisites:

Current: None

Proposed: TSTC 100, TSTC 130, TSTC 160, TSTA 265

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342
WCCC Tech Cert, Transportation Services-Automotive Service: 1346
WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF accreditation has added more depth to the repair tasks, requiring additional credit hrs to accomplish

Topical course outline, current:

1. vehicle emissions systems
2. emission standards
3. gas analysis
4. scan tool diagnostics

Topical course outline, proposed:

1. vehicle emissions systems
2. emission standards
3. gas analysis
4. scan tool diagnostics
5. evaporative system diagnostics
6. EGR system diagnostics
7. PCV and AIR system diagnostics
8. catalytic converter diagnostics

Student Learning Outcomes, current:

1. define vehicle emissions systems
2. analyze exhaust gas test data
3. apply EPA emssion standards
4. obtain emission codes and determine affected system

Student Learning Outcomes, proposed:

1. define vehicle emissions systems
2. analyze exhaust gas test data
3. apply EPA emission standards
4. obtain emission codes and determine affected system
5. diagnose EGR related failures
6. diagnose PCV and AIR system failures
7. perform a catalytic converter performance test
8. perform evaporative system tests and determine fault

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTC 100

	Current	Proposed
Course Prefix:	TSTC	
Course No.:	100	
Credit Hours	1	2
Course Title:	Introduction To Transportation Services	
Contact	Lecture	Lecture
	Lab	Lab
	Field	Field
	Studio	Studio
	Other 1.5	Other 3.0
Engage Min.:	1125	2250

Prep Min.: 1125 2250

Co-requisites:

Current: None

Proposed: TSTC 170, TSTC 171, TSTG 175, TSTG 120, MATH 107

Description for catalog:

Current: Introduction to procedures, tool usage, basic shop safety, and equipment

Proposed: Introduction to procedures, tool usage, basic shop safety, basic employment skills, job documentation and equipment usage.

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF certification requires additional tasks be added to the course. This task addition requires more time to complete.

Topical course outline, current:

1. Transportation industry overview
2. Shop safety
3. ASE Certification
4. Tool usage
5. Equipment usage
6. OSHA "right to know" law
7. Program policies and procedures

Topical course outline, proposed:

1. Transportation industry overview
2. Shop safety
3. ASE Certification
4. Tool usage
5. Equipment usage
6. OSHA "right to know" law
7. Program policies and procedures
8. Vehicle overview
9. Service literature
10. Customer relations
11. Professsionalism
12. Ethics in the repair industry

Student Learning Outcomes, current:

1. pass a safety test with a 100% score
2. define osha's role in the workplace
3. identify common tools used in the industry
4. propely lift and support a vehicle
5. define the rules and regulations for vehicle repair

Student Learning Outcomes, proposed:

1. determine proper repair procedures as defined in a vehicle repair manual
2. pass a safety test with a 100% score
3. define osha's role in the workplace
4. identify common tools used in the industry
5. propely lift and support a vehicle

6. define the rules and regulations for vehicle repair
7. define the ethical and federal mandated repair practices
8. define the role and function of the modern vehicle sub-systems
9. identify professional traits of a repair technican

Essential Learning SLOs, proposed:

N/A

Discussions with affected departments:

N/A

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTC 101

	Current	Proposed
Course Prefix:	TSTC	
Course No.:	101	
Credit Hours	2	3
Course Title:	Vehicle Service and Inspection	
Contact	Lecture	Lecture
	Lab	Lab
	Field	Field
	Studio	Studio
	Other 3.0	Other 4.5
Engage Min.:	2250	3375
Prep Min.:	2250	3375

Co-requisites:

Current:

Proposed: TSTC 130, TSTC 160, TSTG135, CADT101

Description for catalog:

Current: Introduction to vehicle systems, maintenance, and inspection. Service of the vehicle systems with emphasis on inspection and observation.

Proposed: Introduction to vehicle systems, <br> maintenance, inspection, internal combustion <br> engine theory, systems diagnosis, <br> fundamentals and evaluation. Service <br> of the vehicle systems with emphasis on <br> inspection and observation.

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF certification requires additional tasks be added to the course. This task addition requires more time to complete.

Topical course outline, current:

1. Engine Preventative Maintenance
2. Servicing Brake Systems
3. Suspension and Steering Service

Topical course outline, proposed:

1. Engine Preventative Maintenance
2. Servicing Brake Systems
3. Suspension and Steering Service
4. Automotive Engines
5. Theory of Engine Operation
6. Engine Repair and Rebuilding Industry
7. Engine Operating Systems
8. Engine Materials, Fasteners, Seals, and Gaskets
9. Intake and Exhaust Systems
10. Factors Affecting Engine Performance

Student Learning Outcomes, current:

1. perform an oil and filter change
2. replace all engine and transmission filters
3. perform under hood, undervehicle inspections
4. inspect and service the cooling system, exhaust systems and engine control devices
5. describe the steps of an express service

Student Learning Outcomes, proposed:

1. identify automotive engines types
2. define the theory of engine operation
3. define engine repair and rebuilding practices
4. engine operating systems
5. identify engine materials, fasteners, seals, and gaskets
6. identify intake and exhaust systems
7. define the factors affecting engine performance
8. perform and oil and filter change
9. replace all engine and transmission filters
10. perform under hood, undervehicle inspections
11. inspect and service the cooling system, exhaust systems
12. describe the steps of an express service

Essential Learning SLOs, proposed:

N/A

Discussions with affected departments:

N/A

Proposed by: Keith Wright Expected Implemention: Fall 2016

TSTC 130

	Current	**Proposed**
Course Prefix:	TSTC	
Course No.:	130	
Credit Hours	2	
Course Title:	Electrical Fundamentals	Electrical I

Co-requisites:

Current:

Proposed: TSTC 130, TSTC 160, TSTG 135, CADT 101

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

To align with National Automotive Technician Educational Foundation (NATEF) Requirements

Topical course outline, current:

1.

Proposed by: Keith Wright Expected Implemention: Fall 2016

TSTC 160

	Current	**Proposed**
Course Prefix:	TSTC	
Course No.:	160	
Credit Hours	2	
Course Title:	Electronic Control Systems	Electrical II

Co-requisites:

Current: none

Proposed: TSTC 130, TSTC 101, CADT 101, TSTG 135

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

To align with the National Automotive Technician Educational Foundation (NATEF)

Proposed by: Keith Wright Expected Implemention: Fall 2016

TSTC 170

	Current	**Proposed**
Course Prefix:	TSTC	
Course No.:	170	
Credit Hours	1	2
Course Title:	Chassis Fundamentals	
Contact	Lecture	Lecture
	Lab	Lab
	Field	Field
	Studio	Studio

	Other	1.5	Other	3.0
Engage Min.:	1125		2250	
Prep Min.:	1125		2250	

Co-requisites:

Current: none

Proposed: TSTC 100, TSTC 171, TSTG 175, TSTG 120, MATH 107

Description for catalog:

Current: Theory and operation of fr
ont and rear suspension systems, including steering front end geometry and component nomenclature

Proposed: Introduction to front and rear suspension systems, including: steering front end geometry, maintenance,light repair and component nomenclature

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF certification requires additional tasks be added to the course. This task addition requires more time to complete.

Topical course outline, current:

1. Intro to suspension and steering
2. Wheels and tires
3. Steering systems
4. Front suspension systems
5. Rear suspension systems
6. Alignment theory

Topical course outline, proposed:

1. Intro to suspension and steering
2. Wheels and tires
3. Steering systems
4. Front suspension systems
5. Rear suspension systems
6. Pre-aligment inspection
7. Alignment theory
8. Repair procedures

Student Learning Outcomes, current:

1. define suspension geometry
2. identify steering and suspension components
3. define steering geometry
4. identify faulty shocks or struts
5. identify tire coding

Student Learning Outcomes, proposed:

1. define suspension geometry
2. identify steering and suspension components
3. define steering geometry
4. identify faulty shocks or struts
5. perform alignment pre-inspection
6. remove and replace suspension and steering components
7.identify tire coding

8. evaluate tire wear and rotate tires

Essential Learning SLOs, proposed:

N/A

Discussions with affected departments:

N/A

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTC 171

	Current	Proposed
Course Prefix:	TSTC	
Course No.:	171	
Credit Hours	2	
Course Title:	Brake Fundamentals	Brakes I

Co-requisites:

Current:

Proposed: TSTC 100, TSTC 170, TSTC 175, TSTG 120, Math 107

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

To align with Colorado Common Course Numbering and National Automotive Technician Educational Foundation (NATEF)

Proposed by: Keith Wright Expected Implemention: Fall 2016

TSTG 120

	Current	Proposed
Course Prefix:	TSTG	
Course No.:	120	
Credit Hours	3	2
Course Title:	Industry Safety Practices	
Contact	Lecture	Lecture 2
	Lab	Lab
	Field	Field
	Studio	Studio
	Other 4.5	Other
Instr. Activity:	Lecture/Laboratory:	Lecture
Engage Min.:	3375	1500
Prep Min.:	3375	3000

Prerequisites:

Current: None

Proposed: TSTC 100, TSTC 130, TSTC 160

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

The change in credit hours is due to reduced tasks that were moved to TSTC 100 and TSTC 101. The program advisory committee recommended concentrating the TSTG 120 class on OSHA and EPA regulations and move the equipment safety to the courses.

Topical course outline, current:

1. OSHA regulations
2. EPA regulations
3. S/P2 certification
4. Dealership certificatiion
5. Hazard waste regulations

Topical course outline, proposed:

.1. OSHA regulations
2. EPA regulations
3. S/P2 certification

Student Learning Outcomes, current:

1. pass S/P2 certification
2.determine hazardous material waste streams
3.apply OSHA regulations to a work environment
4.define dealership responsiilites
5. apply EPA regulations to a work related scenerio

Student Learning Outcomes, proposed:

1. pass S/P2 certification
2.determine hazardous material waste streams
3.apply OSHA regulations to a work environment
4.apply EPA regulations to a work related scenerio

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTG 135

	Current	**Proposed**
Course Prefix:	TSTG	
Course No.:	135	
Credit Hours	2	
Course Title:	Electrical Component Repair	Starting and Charging Systems
Abbreviated	Elect Comp Repair	Start/Chrg Systems

Prerequisites:

Current: TSTC 100, TSTC 101, and TSTC 130

Proposed: TSTC 100, TSTC 101, TSTC 130, and TSTC 160

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346
WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

The change of the title aligns this course with the Colorado Common Course numbering system

Topical course outline, proposed:

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Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTG 175

	Current	Proposed
Course Prefix:	TSTG	TSTG
Course No.:	175	
Credit Hours	2	
Course Title:	Hydraulic Brake Service	Brakes II

Co-requisites:

Current: None

Proposed: TSTC 100, TSTC 170, TSTC 171 , TSTG 120, Math 107

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341
WCCC AAS, Transportation Services-Diesel Tech: 1342
WCCC Tech Cert, Transportation Services-Automotive Service: 1346
WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

To align with Colorado Common Course Numbering and National Automotive Technician Educational Foundation (NATEF)

Proposed by: Keith Wright Expected Implemention: Fall 2016

TSTG 195

	Current	Proposed
Course Prefix:	TSTG	
Course No.:	195	
Credit Hours	2	4
Course Title:	Climate Control Service	Climate Control
Contact	Lecture	Lecture
	Lab	Lab
	Field	Field
	Studio	Studio
	Other 3.0	Other 6.0
Engage Min.:	2250	6750
Prep Min.:	2250	6750

Co-requisites:

Current:

Proposed: TSTC 100, TSTC 130, TSTC 160

Description for catalog:

Current: Repair, diagnosis, R & R of components,
charging, recycling and testing of
heating and air conditioning systems of
over the road vehicles.

Proposed:
Introduction to repair, diagnosis, R & R of components, charging, recycling and testing of heating and air conditioning systems of over the road vehicles.
Theory of operation, nomenclature,
identification, safety and environmental
impact factors of air conditioning. Also
covers heating and ventilation systems.

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

To align with the National Automotive Technician Educational Foundation (NATEF)

Topical course outline, current:

1. Shop Procedures and Tools
2. Diagnosis and Service of Engine Cooling and Comfort Heating Systems
3.The Manifold and Gauge Set
4. Servicing System Components
5. Air-Conditioning System Servicing and Testing
6. Diagnosis of the Refrigeration System
7. Compressors and Clutches
8. Diagnosis and Service of the System Controls
9. Case and Duct Systems
10. Retrofit (R12) to (R134a)

Topical course outline, proposed:

1. Heating and Air Conditioning-History and the Environment
2. Temperature and Pressure Fundamentals
3. Engine Cooling and Comfort Heating Systems
4. Air-Conditioning System Operating Priciples
5. Refrigerant System Components
6. Shop Procedures and Tools
7. Diagnosis and Service of Engine Cooling and Comfort Heating Systems
8.The Manifold and Gauge Set
9. Servicing System Components
10. Air-Conditioning System Servicing and Testing
11. Diagnosis of the Refrigeration System
12. Compressors and Clutches
13. Diagnosis and Service of the System Controls
14. Case and Duct Systems

Student Learning Outcomes, current:

1. Test and replace heating system components.
2. Perform system performance test.
3. Test and replace refrigerant system components.

4. Inspect heating and cooling systems for leaks.
5. Testing and analyzing refrigerant.
6. Retrofit (R12) to (R134a)

Student Learning Outcomes, proposed:

1. Discuss the history and environmental impacts of refrigeration systems.
2. Interperate and describe temperature and pressure priciples.
3. Describe and discuss engine cooling, comfort heating systems and air-conditionin operation.
4. Identify, describe and discuss refrigerant system components.
5. Discuss and interperate system controls.
7. Test and replace heating system components.
8. Perform system performance test.
9. Test and replace refrigerant system components.
10. Inspect heating and cooling systems for leaks.
11. Test and analyze refrigerant.

Proposed by: Keith Wright Expected Implemention: Fall 2016

TSTG 220

	Current	Proposed
Course Prefix:	TSTG	
Course No.:	220	
Credit Hours	3	
Course Title:	Industry Employment Practices	Workplace Skills
Abbreviated	Ind Empl Practices	Workplace Skills

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

NATEF accreditation has added workplace skills to the acceditation task list, and the program advisory committee recommended the name change to reflect what is actually being taught. This course already contained these tasks so no change to the course outline or SOL's is needed.

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTG 240

	Current	Proposed
Course Prefix:	TSTG	
Course No.:	240	
Credit Hours	4	
Course Title:	Advanced Job Shop	Job Shop
Abbreviated	Adv Job Shop	Job Shop

Prerequisites:

Current: TSTG 140

Proposed: Sophmore status or Consent of Instructor

Description for catalog:

Current: Application of workplace skills in a
controlled shop environment,through the use of real-life lab work projects,
performed in house, when internships or co-op opportunities are not available

Proposed:

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

Title change better reflects the actual course content

Essential Learning SLOs, proposed:

N/A

Discussions with affected departments:

N/A

Proposed by: Gary Looft Expected Implemention: Fall 2016

TSTG 270

	Current	**Proposed**
Course Prefix:	TSTG	
Course No.:	270	
Credit Hours	4	
Course Title:	Advanced Practical Applications	Practical Applications
Abbreviated	Adv Practical Appl	Practical Appl

Prerequisites:

Current: TSTG 170

Proposed: Consent of Instructor

Description for catalog:

Current: Designed to increase student
competency through the use of
internships or co-op training and real-life shop experiences in their chosen area specialty.

Proposed:

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Justification:

Title change better reflects the actual course content

Essential Learning SLOs, proposed:

N/A

Discussions with affected departments:

N/A

Proposed by: Gary Looft Expected Implemention: Fall 2016

Course Deletions

TSTC 110 Credit Hours 1

Type of Change Deletion

Course Title: Engine Fundamentals

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

This course has been combined with TSTC101 and TSTG 115, and fulfills NATEF new certification requiremnts

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTC 140 Credit Hours 1

Type of Change Deletion

Course Title: Drive Train Fundamentals

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

This course has been combined with TSTA 245, TSTA 247, and TSTC 101 and fulfills NATEF new certification requiremnts

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTC 180 Credit Hours 1

Type of Change Deletion

Course Title: Fuel System Fundamentals

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

This course has been combined with TSTC 101, TSTA 265,TSTA 287 and fulfills NATEF new certification requiremnts

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTC 190 Credit Hours 1

Type of Change Deletion

Course Title: Climate Control Fundamentals

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

This course has been combined with TSTG 195, and fulfills NATEF new certification requiremnts

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTD 285 Credit Hours 1

Type of Change Deletion

Course Title: Diesel Fuel Injection

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

With the advent of computerized Diesel Fuel Injection, the course content of this mechanical fuel injection class is slowly diminishing, and is no longer available in textbooks, or used on currrent vehicles.

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTG 140 Credit Hours 4

Type of Change Deletion

Course Title: Job Shop

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

No need for this course at a 100 level

Proposed by: Gary Looft Expected Implementation: Fall 2016

TSTG 170 Credit Hours 4

Type of Change Deletion

Course Title: Practical Applications

Essential Learning Course: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Transportation Services-Automotive Tech: 1341

WCCC AAS, Transportation Services-Diesel Tech: 1342

WCCC Tech Cert, Transportation Services-Automotive Service: 1346

WCCC Tech Cert, Transportation Services-Diesel Mechanics: 1347

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisite for other course(s): Yes ☐ No ☑

Justification:

No need for this course at a 100 level

Proposed by: Gary Looft Expected Implementation: Fall 2016

Program Modification

Transportation Services-Automotive Service: 1346

Degree Type: AAS

Modified Program Name: Advanced Automotive Service Technician

Modified Program Name: Adv Automotive Service Tech

Revision to program sheet: Yes ☑ No ☐

Description of modification:

Name Change; Credit Hours; Sequencing

Program Modifications:
AAS Automotive
Certificate: Automotive

Course Additions:
TSTA 286 Hybrid Vehicles
TSTG 275 ABS/Diagnostics

Course Deletions:
TSTC 110 Engine Fundamentals
TSTC 140 Drive Train Fundamentals
TSTC 180 Fuel Fundamentals
TSTC 190 Climate Control Fundamentals
TSTD 285 Diesel Fuel Injection

Course Modifications:
TSTC 101 Vehicle Service and Inspection
TSTC 130 Electrical Fundamentals
TSTC 160 Electronic Control Systems
TSTC 170 Chassis Fundamentals
TSTC 171 Brake Fundamentals
TSTG 175 Hydraulic Brakes Service

TSTG 135 Electrical Component Repair
TSTG 195 Climate Control Service
TSTG 120 Industrial Safety Practices
TSTG 220 Industrial Employment Practices
TSTA 265 Engine Control Services
TSTA 267 Body and Chassis Controls
TSTA 287 Engine Performanc and Emissions

Justification:

National Automotive Technician Education Foundation (NATEF) 2013 revised standards for program accreditation requires restructuring program content.

Revision to SLOs: Yes ☐ No ☑

Program Outcomes for Transportation Services Technology

Graduates should be able to:

Communication
Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles.

Computational
Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard.

Critical Thinking
Evaluate evidence discovered during the diagnosis/troubleshooting of vehicles and apply those findings to strategies to properly repair the vehicle

Specialized knowledge
Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry.

Demonstrate personal and professional ethical behavior as applied to the Transportation Services industry.

Applied learning
Demonstrate mastery of the current terminology in the Transportation Service industry
Generate substantially error-free products or processes that define the duties of a repair technician
Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence.

Other changes: Yes ☐ No ☑

Discussions with affected departments:

NA

Proposed by: Eric Keith Wright

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

~~2015-2016~~2016-2017 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Transportation Services
Emphasis: ~~Automotive Technology~~Advanced Automotive Service Technician

About This Emphasis . . .
In the Associate of Applied Science degree with a major in Transportation Services, and emphasis in Advanced Automotive Service Technician~~Technology~~, students learn the fundamentals of electronics, starters, ignition, and charging systems~~;~~, air conditioning, cooling and heating systems,~~;~~ safety~~;~~, technical math~~;~~, use of technical manuals~~;~~, basic management skills~~;~~, written and oral communication skills~~;~~, and leadership. Advanced coursework includes an in-depth study of internal combustion engine disassembly, repair, reassembly, diagnosis and troubleshooting~~;~~, suspension systems,~~;~~ and alignment and wheel balance. The Advanced Automotive Service Technician ~~Automotive Technology~~ emphasis prepares students for careers as automotive technicians, parts and service distributors, industrial sales representatives, service managers, and business owners in the transportation services industry.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.html
All CMU associate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis and troubleshooting of vehicles and apply those finding to strategies to properly repair the vehicle. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
5. Demonstrate mastery of the current terminology in the Transportation Service industry and generate substantially error-free products or processes that define the duties of a repair technician.(Specialized Knowledge)
6. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
7. Demonstrate personal and professional ethical behavior as applied to the industry. (Applied Learning)
8. Define the legal and ethical standards required of the vehicle repair industry. (Specialized Knowledge)

NAME: _____ **STUDENT ID #:** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____ 20_____
Signature of Advisor Date

_____ _____ 20_____
Signature of Department Head Date

_____ _____ 20_____
Signature of Registrar Date

DEGREE REQUIREMENTS:

- ~~69~~ 6970 semester hours total (A minimum of 16 taken at CMU in no fewer than two semesters).
- 2.00 cumulative GPA or higher in all CMU coursework and a "C" or better must be achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

ESSENTIAL LEARNING REQUIREMENTS (Minimum ~~15~~ ~~17~~ 5semester hours) See the current catalog for a list of courses that fulfill the requirements below. If a course is on the Essential Learning list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the Essential Learning requirement. The Essential Learning capstone course and co-requisite Essential Speech course (required for bachelor's degrees) cannot be used as options for the below requirements.

Course No Title	Sem.hrs	Grade	Term/Trns
Communication (6 semester hours)			
ENGL 111 English Composition	3		
ENGL 112 English Composition	3		
-OR-			
ENGL 111 English Composition **and**	3		
SPCH 101 Interpersonal Communication **or**	3		
SPCH 102 Speechmaking	3		

Course No Title	Sem.hrs	Grade	Term/Trns
Mathematics - (Minimum 3 semester hours) ~~**Minimum Math 107 Career Mathematics** (Minimum 3 semester hours)~~			
MATH 107 or higher	3		
~~Math Requirement was met in the Light Duty Automotive Technician Certificate~~	3		

Social Sciences, Natural Science, Fine Arts, or Humanities
(Minimum 6 semester hours)

_____ ____ _____	3		
_____ ____ _____	3		

*Please see your advisor for requirements specific to this program.

~~Course No Title~~	~~Sem.hrs~~	~~Grade~~	~~Term/Trns~~

WELLNESS REQUIREMENT (2 semester hours)

KINE 100 Health and Wellness	1		
KINA 1____ _____	1		

ASSOCIATE OF APPLIED SCIENCE: TRANSPORTATION SERVICES – ~~AUTOMOTIVE TECHNOLOGY~~Advanced Automotive Service Technician COURSE REQUIREMENTS
(~~52~~ 5253 semester hours)

Required Courses: ~~23 s(emester~~458 semester hours)

~~TSTC 100~~	~~Intro to Transportation Services~~	~~1~~	~~TSTA 287~~	~~Engine Performance /Emissions~~	~~3~~
~~TSTD 215~~	~~Diesel Engine Controls~~	~~3~~			
~~TSTC 101~~	~~Vehicle Service and Inspection~~	~~2~~	~~TSTA 267~~	~~Body Controls~~	~~3~~
~~TSTC 110~~	~~Engine Fundamentals~~	~~1~~	~~TSTG 195~~	~~Climate Control~~	~~4~~
~~TSTC 130~~	~~Electrical Fundamentals~~	~~2~~			

~~**Completion of Auto Service Tech 38**~~

TSTC 100	Intro To Transportation Service	2	
TSTC 101	Vehicle Service and Inspection	3	
TSTC 130	Electrical I	2	
TSTC 160	Electrical II	2	
TSTC 170	Chassis Fundamentals	2	
TSTC 171	Brakes I	2	
TSTG 120	Industrial Safety Practices	2	
TSTG 135	Starting and Charging Systems	2	
TSTG 175	Brakes II	2	
TSTG 195	Climate Control	4	
TSTG 220	Workplace Skills	3	
TSTG 275	ABS/Diagnostics	2	
TSTA 245	Manual Drive Trains **OR**		
TSTA 247	Automatic Drive Trains	4	
TSTA 265	Engine Control Service	3	
TSTA 267	Body Controls	3	
TSTA 275	Alignment and Suspension Service	3	
TSTA 287	Eng Performance and Emissions	3	
CADT 101	Intro to Computers	1	

Restricted Electives

~~TSTC 140~~	~~Drive Train Fundamentals~~	~~1~~			
~~TSTC 160~~	~~Electronic Control Systems~~	~~2~~			
~~TSTC 170~~	~~Chassis Fundamentals~~	~~1~~			
~~TSTC 171~~	~~Brake System Fundamentals~~	~~2~~			
~~TSTC 180~~	~~Fuel System Fundamentals~~	~~1~~			
~~TSTC 190~~	~~Climate Control Fundamentals~~	~~1~~			
~~TSTG 120~~	~~Industrial Safety Practices~~	~~3~~			
~~TSTG 150~~	~~Fluid Power~~	~~3~~			
~~TSTG 220~~	~~Industry Employment Practices~~	~~3~~			

Choose a minimum of ~~2~~489 semester hours from list below.

_____	____	_____	____	_____	_____
_____	____	_____	____	_____	_____
_____	____	_____	____	_____	_____
_____	____	_____	____	_____	_____

~~**Choose 29 semester hours from**~~**Restricted Electives**~~**:**~~

TSTD 265 Diesel Engine Controls (3)~~TSTA 245 Manual Drive Train (4)~~ ~~TSTG 135 Electrical Component Repair (2)~~

~~TSTA 247 Automatic Drive Train Service (4)~~ ~~TSTG 140 Job Shop (4)~~

~~TSTA 265 Engine Control Services (2)~~ ~~TSTG 170 Practical Application (4)~~

~~TSTA 267 Body and Chassis Controls (2)~~ ~~TSTG 175 Hydraulic Brake Service (2)~~

~~TSTA 275 Alignment and Suspension Service (3)~~ ~~TSTG 195 Climate Control Service (2)~~

~~TSTA 287 Engine Performance and Emissions (2)~~ ~~TSTD 265 Diesel Engine Controls (3)~~

TSTA 289 Alternative Fueled Vehicles (2) TSTG 240 ~~Advanced~~ Job Shop (4)

~~TSTD 285 Diesel Fuel Injection~~TSTA 286 Hybrid Fueled Vehicles (2) TSTG 270 ~~Advanced~~ Practical Applications (4)

TSTG 115 Engine Reconditioning (4) TSTD 215 Diesel Eng Recon (5)~~TSTD 265 Diesel Engine Controls (3)~~

~~TSTG 115 Gas Engine Reconditioning (4)~~ ~~WELD 151 Introduction to Welding (3)~~

Additional expenses – Students entering the program may be required to purchase or have hand tools and appropriate clothing and safety gear with a total cost of approximately $2500.00. This does not include cost of required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields.
Please see faculty advisor for approved electives.

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE WITH A MAJOR IN TRANSPORTATION SERVICES, EMPHASIS IN ADVANCED AUTOMOTIVE SERVICE TECHNICIAN~~ITIONOLOGY~~

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester		First Hours
TSTC 100	Introduction to Transportation Services	12
TSTC 101171	Vehicle Service and InspectionBrakes I	2
TSTC TSTG 110175	Engine FundamentalsBrakes II	12
TSTC 130	Electrical Fundamentals	2
TSTC 160	Electronic Control Systems	2
TSTC 170	Chassis Fundamentals	12
TSTG 120	Industrial Safety Practices	32
MATH 107	Career Mathematics or higher	3
KINE 100	Health and Wellness	1
KINA XXX	Activity	1
ENGL 111	English Composition	3
		183
Electives	TSTA/G/D	3
		18

Spring Semester		Second Hours
TSTC 180130	Fuel System FundamentalsElectrical I	1 2
TSTC 140160	Drive Train FundamentalsElectrical II	12
TSTC TSTG 171135	Brake System FundamentalsStarting and Charging Systems	2
TSTC 190101	Climate Control FundamentalsMaintenance and Inspection	13
TSTG CADT 101150	Fluid PowerComputer Applications	31
TSTG/A/D	Electives	6
ENGL 111	English Essential Learning: Social Sciences, Composition	3
	Natural Science, Fine Arts or Humanities	36
		16 7

SOPHOMORE YEAR

Fall Semester		Third Hours
ENGL	112 or SPCH 101 or SPCH 102	3
TSTA	245 Manual Drive Trains or	
TSTA	247 Automatic Drive Trains	4
Essential Learning: Social Sciences, Natural Science, Fine Arts, or Humanities	3	3
ENGL 112 or SPCH 101 or SPCH 102		3
		3
TSTA/G/D	Electives 11TSTG 275 ABS/Diagnostics	2
TSTA	265 Engine Control Service	3
TSTA	275 Alignment and Suspension Service	3
TSTG	220 Work Place Skills	3
		18

Fourth Semester		Hours
		17

Spring Semester		Hours
TSTG 220	Industry Employment Practices	3
TSTA/G/D	Electives	9TSTA
267	Body/Chassis Controls	3
KINE 100	Health and Wellness	
1TSTA 287	Engine Performance and Emissions	3
KINA XXX	Activity	1TSTG
195	Climate Control	4
TSTA/G	Restricted Electives	48
Essential Learning: Social Sciences, Natural Science, Fine Arts, or Humanities		or
Humanities	3	33
		1877

18

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You

must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.

3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

Transportation Services-Automotive Service: 1346

Degree Type: Tech Cert

Modified Program Name: Light Duty Automotive Technician

Modified Program Name: Light Duty Auto Tech

Revision to program sheet: Yes ☑ No ☐

Description of modification:

Name Change; Credit Hours; Sequencing

Program Modifications:
AAS Automotive and Diesel
Certificate: Automotive and Diesel

Course Additions:
TSTA 286 Hybrid Vehicles
TSTG 275 ABS/Diagnostics

Course Deletions:
TSTC 110 Engine Fundamentals
TSTC 140 Drive Train Fundamentals
TSTC 180 Fuel Fundamentals
TSTC 190 Climate Control Fundamentals
TSTD 285 Diesel Fuel Injection

Course Modifications:
TSTC 101 Vehicle Service and Inspection
TSTC 130 Electrical Fundamentals to Electrical I
TSTC 160 Electronic Control Systems to Electrical II
TSTC 170 Chassis Fundamentals
TSTC 171 Brake Fundamentals
TSTG 175 Hydraulic Brakes Service
TSTG 135 Electrical Component Repair
TSTG 195 Climate Control Service
TSTG 120 Industrial Safety Practices
TSTG 220 Industrial Employment Practices
TSTA 265 Engine Control Services
TSTA 267 Body and Chassis Controls
TSTA 287 Engine Performanc and Emissions

Justification:

National Automotive Technician Education Foundation (NATEF) 2013 revised standards for program accreditation requires restructuring program content.

Revision to SLOs: Yes ☐ No ☑

Other changes: Yes ☐ No ☑

Discussions with affected departments:

NA

Proposed by: Eric Keith Wright

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

~~2015-2016~~2016-2017 PETITION/PROGRAM SHEET
Award: Technical Certificate
Program of Study: Transportation Services
Specialization: ~~Automotive Service~~Light Duty Automotive Technician

About This Certificate . . .

Students learn the fundamentals of electronics, ~~;~~ starters, ignition, and charging systems~~;~~, air conditioning, brakes, suspension and steering~~-~~, cooling and heating systems,~~;~~ safety,~~;~~ technical math~~;~~, use of technical manuals~~;~~, basic management ~~skills;~~, ~~written and oral~~ communication ~~skills;~~ and leadership skills. ~~Advanced coursework includes an in-depth study of internal combustion engine disassembly, repair, reassembly, diagnosis and troubleshooting; suspension systems; and alignment and wheel balance.~~ Career options include light duty automotive/diesel technician, parts and service distributor~~, industrial sales representative and service manager.~~

For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.html

All CMU certificate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis and troubleshooting of vehicles and apply those finding to strategies to properly repair the vehicle. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
5. Demonstrate mastery of the current terminology in the Transportation Service industry and generate substantially error-free products or processes that define the duties of a repair technician.(Specialized Knowledge)
6. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
7. Demonstrate personal and professional ethical behavior as applied to the industry. (Applied Learning)
8. Define the legal and ethical standards required of the vehicle repair industry. (Specialized Knowledge)

NAME: _____ **STUDENT ID #:** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____20_____
Signature of Advisor Date

_____ _____20_____
Signature of Department Head Date

_____ _____20_____
Signature of Registrar Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

DEGREE REQUIREMENTS:

- 2.00 cumulative GPA or higher in all CMU coursework
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- "C" or better in each course which comprises the area of emphasis or specialization.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- Additional Expenses – Students entering the program may be required to purchase or have hand tools and appropriate clothing and safety gear with a total cost of approximately $2,500.00 This does not include cost of required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields.
- Please see faculty advisor for approved electives.
- See the "Undergraduate Graduation Requirements" in the Colorado Mesa University catalog for additional graduation information

Technical Certificate: Transportation Services – Light Duty Automotive ~~Service~~ (~~36~~ 256 Semester Hours)

See the current catalog for a list of courses that fulfill the requirements below.

Course No	Title	Sem.hrs	Grade	Term/Trns
TSTC 100	Intro to Transportation Services	~~1~~2		
TSTC 101	Vehicle Service & Inspection	~~2~~3		
~~TSTC 110~~	~~Engine Fundamentals~~	~~1~~		
TSTC 130	Electrical ~~Fundamentals~~I	2		
~~TSTC 140~~	~~Drive Train Fundamentals~~	~~1~~		
TSTC 160	~~Electronic Control Systems~~Electrical II	2		
TSTC 170	Chassis Fundamentals	~~1~~2		
TSTC 171	Brakes I ~~System Fundamentals~~	2		
TSTC 175	Brakes II	2		
~~TSTC 180~~	~~Fuel System Fundamentals~~	~~1~~		
~~TSTC 190~~	~~Climate Control Fundamentals~~	~~1~~		
MATH 107	Career Mathematics	3		
TSTG 120	Industry Safety Practices	~~3~~2		
~~TSTG 150~~	~~Fluid Power~~	~~3~~		
CADT 101	Introduction to Computers	1		

~~Restricted~~ Restricted Electives, Choose a minimum of ~~3~~413 semester hours from list below. (Please see advisor when selecting electives)

~~Choose~~ 13~~semester hours from~~ Restricted Electives:

~~TSTA 245 Manual Drive Train (4~~TSTG 115 Gas Engine Reconditioning (4)~~)~~

~~TSTG 135 Electrical Component Repair (2)~~

~~TSTA 247 Automatic Drive Train Service (4)~~

~~TSTG 140 Job Shop (4)~~

~~TSTA 265 Engine Control Services (2)~~

~~TSTG 170 Practical Application (4)~~

~~TSTA 267 Body and Chassis Controls (2~~TSTA 286 Hybrid Vehicles (2)~~)~~

TSTA 289 Alternative Fueled Vehicles (2)~~TSTG 175 Hydraulic Brake Service (2)~~

~~WELD 151 Introduction To Welding (3)~~

~~TSTA 275 Alignment and Suspension Service (3)~~

TSTG 195 Climate Control ~~Service~~ (~~2~~4)

~~TSTA 287 Engine Performance and Emissions (2)~~

~~TSTG 220 Industry Employment Practices (3)~~

~~TSTA 289 Alternative Fueled Vehicles (2)~~

~~TSTG 240 Advanced Job Shop (4)~~

~~TSTG 115 Gas Engine Reconditioning (4)~~

~~TSTG 270 Advanced Practical Applications (4)~~

TSTD 265 Diesel Engine Controls (3)

TSTG 150 Fluid Power (3)

SUGGESTED COURSE SEQUENCING FOR THE TECHNICAL CERTIFICATE WITH A PROGRAM OF STUDY IN TRANSPORTATION SERVICES, SPECIALIZATION IN AUTOMOTIVE SERVICE

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

First Semester		Hours
TSTC 100	Introduction to Transportation Services	12
TSTC 101	Vehicle Service and Inspection	2
TSTC 110	Engine Fundamentals	1
TSTC 130	Electrical Fundamentals	2
TSTC 160	Electronic Control Systems	2
TSTC 170	Chassis Fundamentals	12
MATH 107	Career Mathematics	3
TSTG 120	Industry Safety Practices	23
TSTC 171	Brakes I	2
TSTCG 175	Brakes II	2
		2
TSTA/D/G	Electives	3
		13
		13
		18

Second Semester		Hours
TSTC 140	Drive Train Fundamentals	1
TSTC 130	Electrical I	2
TSTC 160	Electrical II	2
TSTG 135	Starting and Charging Systems	2
TSTC 101	Maintenance Vehicle Service and Inspection	3
CADT 101	Intro to Computers Applications	1
TSTC 171	Brake System Fundamentals	2
TSTC 190	Climate Control Fundamentals	1
TSTC 180	Fuel System Fundamentals	1
TSTG 150	Fluid Power	3
TSTA/D/G	Restricted Electives	34
		10
		123
		18

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).
6. NOTE: Students should consult the Financial Aid Office for eligibility requirements for undergraduate and graduate certificates

Transportation Services-Diesel Tech: 1342

Degree Type: AAS

Revision to program sheet: Yes ☑ No ☐

Description of modification:

Credit Hours; Sequencing

Justification:

National Automotive Technician Education Foundation (NATEF) 2013 revised standards for program accreditation requires restructuring program content.

Revision to SLOs: Yes ☐ No ☑

Other changes: Yes ☐ No ☑

Discussions with affected departments:

NA

Proposed by: Eric Keith Wright

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

~~2015-2016~~2016-2017 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Transportation Services
Emphasis: Diesel Technology

About This Emphasis . . .

In the Associate of Applied Science degree with a major in Transportation Services and emphasis in Diesel Technology, students learn the fundamentals of electronics, starters, ignition, and charging systems; air conditioning, cooling and heating systems; safety; technical math; use of technical manuals; basic management skills; written and oral communication skills; and leadership. Advanced coursework includes an in-depth study of internal combustion engine disassembly, repair, reassembly, diagnosis and troubleshooting; suspension systems; and alignment and wheel balance. The diesel technology emphasis concentrates on on-road trucks and light duty diesel-powered vehicles. Students will be prepared for careers as diesel technicians, parts and service distributors, industrial sales representatives, service managers, and business owners in the transportation services industry.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.html

All CMU associate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis and troubleshooting of vehicles and apply those finding to strategies to properly repair the vehicle. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
5. Demonstrate mastery of the current terminology in the Transportation Service industry and generate substantially error-free products or processes that define the duties of a repair technician.(Specialized Knowledge)
6. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
7. Demonstrate personal and professional ethical behavior as applied to the industry. (Applied Learning)
8. Define the legal and ethical standards required of the vehicle repair industry. (Specialized Knowledge)

NAME: _____ **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____20_____
Signature of Advisor Date

_____ _____20_____
Signature of Department Head Date

_____ _____20_____
Signature of Registrar Date

DEGREE REQUIREMENTS:

- 6~~1~~2~~9~~ semester hours total (A minimum of 16 taken at CMU in no fewer than two semesters).
- 2.00 cumulative GPA or higher in all CMU coursework and a "C" or better must be achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

ESSENTIAL LEARNING REQUIREMENTS (Minimum 15 semester hours) See the current catalog for a list of courses that fulfill the requirements below. If a course is on the Essential Learning list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the Essential Learning requirement. The Essential Learning capstone course and co-requisite Essential Speech course (required for bachelor's degrees) cannot be used as options for the below requirements.

Course	No	Title	Sem.hrs	Grade	Term/Trns
Communication (6 semester hours)					
ENGL	111	English Composition	3		
ENGL	112	English Composition	3		
-OR-					
ENGL	111	English Composition **and**	3		
SPCH	101	Interpersonal Communication **or**	3		
SPCH	102	Speechmaking	3		
Mathematics: MATH 107 Career Mathematics or higher (Minimum 3 semester hours)					
			3		
Social Science, Natural Science, Fine Arts or Humanities, Fine Arts, or Humanities (Minimum 6 semester hours)					
			3		
			3		

*Please see your advisor for requirements specific to this program.

Course	No	Title	Sem.hrs	Grade	Term/Trns
WELLNESS REQUIREMENT (2 semester hours)					
KINE	100	Health and Wellness	1		
KINA	1___		1		

ASSOCIATE OF APPLIED SCIENCE: TRANSPORTATION SERVICES – DIESEL TECHNOLOGY COURSE REQUIREMENTS
(~~54~~52~~~~ semester hours)

Required Courses: (~~23semester~~ 29 semester hours)					
TSTC	100	Intro to Transportation Services	~~1~~2		
TSTC	101	Vehicle Service and Inspection	~~2~~3		
~~TSTC~~	~~110~~	~~Engine Fundamentals~~	~~1~~		
TSTC	130	Electrical ~~Fundamentals~~I	2		
~~TSTC~~	~~140~~	~~Drive Train Fundamentals~~	~~1~~		
TSTC	160	~~Electronic Control Systems~~Electrical II	2		
TSTC	170	Chassis Fundamentals	~~1~~2		
TSTC	171	~~Brake System Fundamentals~~Brakes I	2		
~~TSTC~~	~~180~~	~~Fuel System Fundamentals~~	~~1~~TSTG	175	Brakes II 2
~~TSTC~~	~~190~~	~~Climate Control Fundamentals~~	~~1~~TSTG	195	Climate Control Service 4
TSTG	120	Industrial Safety Practices	~~3~~2		
TSTG	150	Fluid Power	3		
TSTG	220	~~Industry Employment Practices~~Workplace Skills	3		
TSTG	135	Starting and Charging Systems	2		

Choose ~~29~~ 156 credit hours from list below.

Choose ~~29~~ 15 semester hours from:

TSTA 245 Manual Drive Trains (4)
TSTA 275 Alignment and Suspension Service (3)
TSTA 267 Body ~~and Chassis~~ Controls (3~~2~~)
TSTA 287 Engine Performance and Emissions ~~(~~ 23)
TSTA 289 Alternative Fueled Vehicles (2)
TSTD 177Air Systems Repair and Service (2)
TSTD 215 Diesel Engine Reconditioning (5)
TSTD 265 Diesel Engine Controls (3)
TSTD 275 Heavy Duty Suspension (2)
WELD 151 Introduction to Welding (3)

~~TSTD 285 Diesel Fuel Injection (2)~~
TSTG 115 Gas Engine Reconditioning (4)
~~TSTG 135 Electrical Component Repair (2)~~
~~TSTG 140 Job Shop (4)~~
~~TSTG 170 Practical Application (4)~~
~~TSTG 175 Hydraulic Brake Service (2)~~
~~TSTG 195 Climate Control Service (2)~~
TSTG 240 ~~Advanced~~ Job Shop (4)
TSTG270 ~~Advanced~~PracticalApplications(4)

Additional expenses – Students entering the program may be required to purchase or have hand tools and appropriate clothing and safety gear with a total cost of approximately $2500.00. This does not include cost of required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields.

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE WITH AN EMPHASIS IN TRANSPORTATION SERVICES – DIESEL TECHNOLOGY

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester		Hours
TSTC 100	Introduction to Transportation Services	12
~~TSTC 101~~	~~Vehicle Service and Inspection~~	~~2~~
~~TSTC 110~~	~~Engine Fundamentals~~	~~1~~
TSTC 171	Brakes I	2
TSTG 175	Brakes II	2
~~TSTC 130~~	~~Electrical Fundamentals~~	~~2~~
~~TSTC 160~~	~~Electronic Control Systems~~	~~2~~
TSTC 170	Chassis Fundamentals	12
TSTG 120	Industrial Safety Practices	32
MATH 107	Career Mathematics or higher	33
TSTA/G/D	Electives	3
~~Electives~~	~~TSTA/G/D~~	~~3~~
		~~18~~
16		

Spring Semester		Hours
TSTC 101	Vehicle Service and Inspection	3
TSTC 130	Electrical I	2
~~TSTC 135~~	~~Starting and Charging Systems~~	~~2~~
TSTC 160	Electrical II	2
~~TSTC 140~~	~~Drive Train Fundamentals~~	~~1~~
~~TSTC 171~~	~~Brake System Fundamentals~~	~~2~~
~~TSTC 180~~	~~Fuel System Fundamentals~~	~~1~~
TST~~C 190~~	~~Climate Control Fundamentals~~	~~1~~G
195	Climate Control Service	4
TSTG 150	Fluid Power	3
~~TSTA/G/D~~	~~Electives~~	~~6~~
ENGL 111	English Composition	3
		~~17~~197

SOPHOMORE YEAR

Fall Semester		Hours
Essential Learning Soc/Beh Sci., Humanities, Speech		3
ENGL 112 or SPCH 101 or SPCH 102	~~3~~	3
KINE 100	Health and Wellness	1
TSTG 135	Starting and Charging Systems	2
TSTG 220	Workplace Skills	3
TSTA/G/D	Electives	~~11~~1252
		18~~47~~

Spring Semester		Hours
~~TSTG 220~~	~~Industry Employment Practices~~	~~3~~
TSTA/G/D	Electives	10~~9~~
~~KINE 100~~	~~Health and Wellness~~	~~1~~
KINA xxx	Activity	1
Essential Learning Soc/Beh Sci., Humanities, Speech		3
		16~~57~~

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.

3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

Transportation Services-Diesel Mechanics: 1347

Degree Type: Tech Cert

Revision to program sheet: Yes ☑ No ☐

Description of modification:

Credit Hours; Sequencing

Justification:

National Automotive Technician Education Foundation (NATEF) 2013 revised standards for program accreditation requires restructuring program content.

Revision to SLOs: Yes ☐ No ☑

Other changes: Yes ☐ No ☑

Discussions with affected departments:

NA

Proposed by: Eric Keith Wright

Director of Teacher Education Signature:

Expected Implementation: Fall 2016

~~2015-2016~~2016-2017 PETITION/PROGRAM SHEET
Award: Technical Certificate
Program of Study: Transportation Services
Specialization: Diesel Mechanics

About This Certificate . . . Students learn the fundamentals of electronics, starters, ignition, and charging systems; air conditioning, cooling and heating systems; safety; technical math; use of technical manuals; basic management skills; written and oral communication skills; and leadership. Advanced coursework includes an in-depth study of internal combustion engine disassembly, repair, reassembly, diagnosis and troubleshooting; suspension systems; and alignment and wheel balance. The diesel mechanics specialization concentrates on on-road trucks and light duty diesel-powered vehicles. Career options include automotive/diesel technician, parts and service distributor, industrial sales representative, and service manager.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.html

All CMU certificate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis and troubleshooting of vehicles and apply those finding to strategies to properly repair the vehicle. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
5. Demonstrate mastery of the current terminology in the Transportation Service industry and generate substantially error-free products or processes that define the duties of a repair technician.(Specialized Knowledge)
6. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
7. Demonstrate personal and professional ethical behavior as applied to the industry. (Applied Learning)
8. Define the legal and ethical standards required of the vehicle repair industry. (Specialized Knowledge)

NAME: _____ **STUDENT ID #:** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ _____ 20_____
Signature of Advisor Date

_____ _____ 20_____
Signature of Department Head Date

_____ _____ 20_____
Signature of Registrar Date

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

DEGREE REQUIREMENTS:

- 2.00 cumulative GPA or higher in all CMU coursework
- "C" or better in each course which comprises the area of emphasis or specialization.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- Additional Expenses – Students entering the program may be required to purchase or have hand tools and appropriate clothing and safety gear with a total cost of approximately $2,500.00 This does not include cost of required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields.
- Please see faculty advisor for approved electives.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information

Technical Certificate: Transportation Services – Diesel Mechanics
(~~36~~ 32 Semester Hours) See the current catalog for a list of courses that fulfill the requirements below.

Course	No	Title	Sem.hrs	Grade	Term/Trns
TSTC	100	Intro to Transportation Services	~~1~~2		
TSTC	101	Vehicle Service & Inspection	~~2~~3		
~~TSTC~~	~~110~~	~~Engine Fundamentals~~	~~1~~		
TSTC	130	~~Electrical Fundamentals~~Electrical I	2		
~~TSTC~~	~~140~~	~~Drive Train Fundamentals~~	~~1~~		
TSTC	160	Electrical ~~Control Fundamentals~~II	2		
TSTC	170	Chassis Fundamentals	~~1~~2		
TSTC	171	~~Brake System Fundamentals~~Brakes I	2		
~~TSTC~~	~~180~~	~~Fuel System Fundamentals~~	~~1~~		
		TSTG 175 Brakes II	2		
~~TSTC~~	~~190~~	~~Climate Control Fundamentals~~	~~1~~		
		TSTG 195 Climate Control	4		
MATH	107	Career Mathematics	3		
TSTG	120	Industry Safety Practices	~~3~~2		
TSTG	150	Fluid Power	3		

Restricted Electives, Choose ~~13semester~~ 5 semester hours from list below. (Please see advisor when selecting electives).

Choose ~~13~~ 5 semester hours from:

~~TSTA 245 Manual Drive Trains (4)~~
TSTA 265 Engine Control Services (2)
TSTA 267 Body and Chassis Controls (2)
~~TSTA 287 Engine Performance and Emissions 2)~~
TSTG 135 Electrical Component Repair (2)
~~TSTA 289 Alternative Fueled Vehicles (2)~~
~~TSTG 140 Job Shop (4)~~
TSTD 177Air Systems Repair and Service (2)
~~TSTG 170 Practical Application (4)~~
TSTD 215 Diesel Engine Reconditioning (5)
WELD 151 Introduction to Welding (3)
~~TSTG 175 Hydraulic Brake Service (2)~~
TSTD 265 Diesel Engine Controls (3)
TSTG 195 Climate Control Service (~~2~~4)
TSTD 275 Heavy Duty Suspension (2)
TSTG 240 ~~Advanced~~ Job Shop (4)
~~TSTD 285 Diesel Fuel Injection (2~~TSTG 135 Charging and Starting Systems (2)~~)~~
TSTG 270 ~~Advanced~~ Practical Applications (4)
TSTG 220 ~~Industry Employment Practices~~Workplace Skills (3)

SUGGESTED COURSE SEQUENCING FOR THE TECHNICAL CERTIFICATE WITH A PROGRAM OF STUDY IN TRANSPORTATION SERVICES, SPECIALIZATION IN DIESEL MECHANICS

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

First Semester		Hours
TSTC 100	Introduction to Transportation Services	~~1~~2
~~TSTC 101~~	~~Vehicle Service and Inspection~~	~~2~~
~~TSTC 110~~	~~Engine Fundamentals~~	~~1~~
~~TSTC 130~~	~~Electrical Fundamentals~~	~~2~~
~~TSTC 160~~	~~Electronic Control Fundamentals~~	~~2~~
TSTC 170	Chassis Fundamentals	~~1~~2
TSTC 171	Brakes I	2
TSTG 175	Brakes II	2
TSTG 120	Industry Safety Practices	~~3~~2
Electives		3
MATH 107	Career Mathematics	3
		16~~8~~

Second Semester		Hours
TSTC 101	Vehicle Service and Inspection	~~2~~3
TSTC 130	Electrical Fundamentals	2
TSTC 160	Electronic Control Fundamentals	2
~~TSTC 140~~	~~Drive Train Fundamentals~~	~~1~~
~~TSTC 171~~	~~Brake System Fundamentals~~	~~2~~
~~TSTC 190~~	~~Climate Control Fundamentals~~	~~1~~
~~TSTC 180~~	~~Fuel System Fundamentals~~	~~1~~
TSTG 150	Fluid Power	3
TSTG 195	Climate Control Service	4
TSTAG/D	Electives	~~1~~02
		16~~8~~

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).
6. NOTE: Students should consult the Financial Aid Office for eligibility requirements for undergraduate and graduate certificates

Department: WCCC (Viticulture)

Program Additions

Viticulture and Enology

Degree Type: AAS

Abbreviated Name: Viticulture and Enology

Proposed by: Benjamin R. Keefer

Expected Implementation: Fall 2016

2015-16 DEPARTMENT WORKSHEET FOR PROGRAM ADDITION
Colorado Mesa University Curriculum Committees

NOTE: All related course changes must be submitted on separate forms.

a. Identifying information

Department: **WCCC**
If new department, please enter name:

Program: Degree type: **AAS**
Program/concentration Name: **Viticulture and Enology**

Abbreviated program/concentration (max 30 characters): **Viticulture and Enology**

PROPOSED AND PREPARED BY:
Name: **Benjamin R. Keefer, Ph.D, Assistant Technical Professor** Date: **8/17/2015**
Email: **keefer@coloradomesa.edu** Phone: **970-255-2754**

Additional required information for each proposal for a program addition: (see Section IV.F of Curriculum Manual)

1. Complete items **b** through **m** on the following pages.

2. Complete the three CDHE tables at the end of this document. These tables MUST be included for all new program proposals. If any of the fields do not apply, please enter NA or other explanation.

3. Discuss the proposal with all departments affected by the program.
   Enter NA or dates/outcomes of such discussions

4. Submit complete program sheet. The most up-to-date program sheet templates are available as Word documents at R:\Curriculum\Program Sheets for Curriculum Program Modifications.

5. Submit this completed form to the Library's Curriculum Committee representative and the Director of Financial Aid a week prior to the published proposal submission deadline.

6. Obtain departmental approval according to department-specific procedures.

Implementation Deadlines
Program additions and modifications approved at the September-February curriculum meetings are generally implemented the following academic year. See Section II.D of the Curriculum Manual. Exceptions are rare and granted only in extenuating circumstances. To request a different effective date, the academic department head should contact the curriculum committee chair. (Note: in the approval process only the VPAA will ultimately approve or deny the request.)

REVIEWED BY DEPARTMENT'S CURRICULUM COMMITTEE REPRESENTATIVE:
Name: **Carolyn Ferreira-Lillo** Date: **12/1/2015**

APPROVED BY DEPARTMENT HEAD:
Name: **Christine Murphy** Date: **12/1/2015**

APPROVED BY DIRECTOR OF TEACHER EDUCATION (REQUIRED FOR TEACHING PROGRAMS)
Name: Date:

Submit to the chair of the appropriate curriculum committee.

b. Demonstration of compliance with CMU requirements related to student learning outcomes (SLOs):

1) Identify program student learning outcomes (SLOs)
2) Identify linkage of program SLOs to institutional SLOs
3) Illustrate relationship of SLOs to proposed curriculum using curriculum map format
4) Identify planned assessments for the program SLO.

See Attachment A

c. Program goals as they pertain to Colorado Mesa University's goals and objectives and Colorado Mesa University's Role and Mission.

The goals of the proposed viticulture and enology program align with the following Colorado Mesa University Institutional Strategic Goals as described below:

CMU Strategic Goal 1: To raise the level of educational attainment in the 14-county region through the delivery of a wide array of quality programs that respond to regional needs at differing locations, formats, and times by developing Western Colorado Community College as an institution of access, affordability, and excellence that compliments Colorado Mesa University.

> **The proposed AAS in Viticulture and Enology addresses the present demands for a skilled workforce in the industry, as well as prepares individuals to engage in the industry as employees, managers and/or business owners. Through the use of highly-qualified faculty, the program will develop a regional reputation for excellence.**

CMU Strategic Goal 4: To actively engage students of all backgrounds in on- and off-campus activities that broaden their educational experiences and enhance their successes.

> **Students enrolled in the proposed AAS in Viticulture and Enology will be encouraged to participate in the student organization for agriculture, the Aggies Club. Through this participation, V&E students will be provided opportunities to participate in leadership activities and industry-related conferences.**

CMU Strategic Goal 5: To expand the University's use of technology as it contributes to an exceptional student learning environment and broadened educational delivery.

> **Topic-appropriate courses will be made available using distance-learning technologies to expand access to the program to place-bound students in the region.**

CMU Strategic Goal 6: To strengthen Colorado Mesa's brand perception and awareness to support and enhance the long term stature, growth and competitive position of the institution.

> **As the only formal degree program in viticulture and enology in the state of Colorado, the proposed V&E program will help strengthen CMU's and WCCC's reputation for unique, high-quality educational programming.**

d. Program strengths, special features, innovations, and/or unique elements.

The proposed AAS in Viticulture and Enology will be unique in a variety of ways, beginning with the fact that it is the only associate degree in viticulture and enology available in the state of Colorado, and is located in the major grape-growing region of the state. Due to this location, students will learn in an environment that is surrounded by active viticulture and wine-making businesses. Being offered through the Western Colorado Community College division of CMU, the program will be readily accessible to all qualified students, and can be completed within a two-year timeframe. Through its commitment to applied-learning, the V&E program will provide the student the opportunity to further develop their knowledge through the application of modern viticulture and wine-making practices.

e. External agencies, such as program accreditations, professional associations, as well as licensing requirements that have helped shape the program's curriculum (i.e., effects such as length of the program, on program content or mode of delivery, etc.). Do faculty members anticipate seeking program accreditation at appropriate date?

The curriculum for the proposed AAS in Viticulture and Enology was developed with the consultation of selected grape growers and winemakers, Dr. Horst Caspari, the Colorado State University research specialist in Viticulture, and Dr. Stephen Menke, the Colorado State University research specialist in Enology. The Directors from the two wine-related agencies in Colorado, the Colorado Wine Industry Board, and the Colorado Association of Viticulture and Enology, assisted in identifying information and disseminating program research questionnaires to their respective membership.

Presently, there are no formal accreditation organizations for viticulture and enology.

f. Program admissions requirements (if any beyond admission to institution).

There are no additional admission requirements beyond those of the institution.

g. Rationale and justification for the program demonstrating the demand, as evidenced by:

(1) Employer need/demand as demonstrated by evidence such as:

(a) identification of several potential employers of program graduates;

(b) projected regional and/or statewide need for graduates from current labor market analyses and/or future workforce projections/studies (potential source: www.occsupplydemand.org/)

(c) surveys made by external agencies;

(d) letters of direct employer support may be used. Include letters indicating the availability of positions for graduates of the proposed programs, signed by individual in a senior position of authority.Page 27 of 41

(2) Student demand as demonstrated by evidence such as surveys of potential students to answer the question: "what is the student population served by program implementation?"

The investigations behind the decision to propose the AAS in Viticulture and Enology included the following steps and information discovered:

In 2012 and 2013, the Agriculture Program Advisory Committee suggests that a Viticulture and Enology program should be explored based on the rationale of:

- **Developing wine industry in the western Colorado, as well as the front range of Colorado.**

- **Economic study performed by Dawn Thilmany, Colorado State University, in 2013 suggests:**
  - **Coloradoans consume more wine than national average**
  - **Colorado wine steady increase in market share (both volume and value) of Colorado wine consumers**
  - **Challenging business model, with many potential avenues for continued growth**
- **Successful V&E programs at other community colleges (ex: Walla Walla Community College)**

Spring 2014

Meeting with wine and viticulture business representatives on March 5, 2014.

- **Discussed concept of a viticulture and enology education program at CMU/WCCC**
- **Pros: need for more Colorado grape production; potential for industry growth thus more employment or new businesses; potential need for skilled viticulturalists**
- **Cons: challenging business environment**
- **Need to assess existing V&E businesses, and potential for students**

Fall 2014

Colorado Viticulture and Enology Business/Industry Survey

- **Survey was developed (reviewed by Ag Program Advisory Committee and selected area V&E business owners) and administered by Colorado Mesa University, Office of Institutional Research, in summer/fall of 2014. The two major V&E business organizations in the state (Colorado Wine Industry Board, and Colorado Association of Viticulture and Enology) assisted with the dissemination of the survey.**
- **22 businesses completed the survey**
- **Survey results confirmed much of what the Ag Advisory Committee members had assumed:**
  - **Newer industry, comprised of many small businesses with few employees**
  - **Most businesses reported difficulty in finding new employees with an education in V&E, with most of the existing employees having no formal education in V&E.**
  - **Nearly 70% (68.4%) of the businesses reported an interest in contributing time and energy in helping to develop a program.**

Spring 2015

Student Interest Survey

- **Survey was developed by WCCC Agriculture Program faculty, and administered by Colorado Mesa University, Office of Institutional Research, during the Spring 2015 semester**
- **Population surveyed were existing CMU students**
- **750 students participated in the survey. 245 students (32.7%) responded that they were interested in taking courses in V&E. 121 students indicated an interest in attaining either a certificate or degree in V&E.**

Spring/Summer 2015

WCCC Agriculture Program faculty completed a draft curriculum for technical certificates in viticulture or enology, and an AAS degree in viticulture and enology. Curriculum has been reviewed by various Ag Advisory Committee members, viticulture and enology business owners, and Colorado State University V&E specialists. Topics still being investigated include potential faculty that could be available on at least a part-time basis; and equipment and facility needs.

h. Relationship of the proposed program to existing programs on campus and to similar programs within the state, with a rationale reflecting that proposed program demand cannot be met by another program (i.e., program implementation is not an unnecessary duplication)

.

As of this date, the only formal education sequence in viticulture and enology offered by a college/university in Colorado is at Colorado State University. Colorado State University offers a bachelor of science in Horticulture, with a concentration in Viticulture and Enology. The concentration consists of four courses (two in viticulture

and two in enology), and a total of eight semester credit hours, of instruction specific to viticulture and enology. All four courses are upper division (300 and 400-level). Beyond the concentration offered by CSU, there are no degree, or certificate programs in Viticulture and Enology offered in the state of Colorado.

The proposed AAS in Viticulture and Enology, being offered through the Western Colorado Community College division of Colorado Mesa University, is physically located in the center of the state's wine grape production area. The program will provide an educational sequence that is unique in Colorado, as it provides a comprehensive educational sequence specific to the field of study, and it is available to entry-level college/university students.

i. Curriculum, including identification of new courses and the numbers, names, and sequencing of all courses, as well as demonstration of compliance with CMU's Credit Hour Policy as required by the U.S. Department of Education and articulated by the Higher Learning Commission;

See 2015-16 PETITION/PROGRAM SHEET; AAS-Viticulture and Enology

j. List of faculty and their qualifications. (Is there a need for additional faculty?)

The program will require faculty with the appropriate combination of education and experience in the fields of viticulture, enology, or both. A minimum of a Bachelors degree in a related area of study, a Masters degree is preferred. Faculty must have a level of practical experience necessary for vocational credentialing in viticulture and/or enology.

Viticulture and Enology is a unique area of study. The Agriculture program and its advisory committee have made multiple attempts to identify individuals who would be willing to teach on a part-time basis, with no success to-date, The two primary challenges in securing part-time faculty include (1) the unique combination of knowledge in viticulture/horticulture and enology, and (2) the applied nature of the program, meaning that the potential instructors are not available to teach the topics when needed due to the fact that they are actively engaged in their own businesses at that time. The Agriculture program, and its advisory committee, have concluded that the addition of a full-time faculty member will be required.

k. Description of learning resources needed for implementation. Scope and quality of library holdings, laboratories, clinical facilities, and technological support as applicable. Department's recommendations for additions to the Library's collection.

The proposed program will require a variety of physical resources including general use classroom spaces, and laboratories suitable for the plant and soil sciences. The viticulture curriculum will require a field site suitable for the establishment of an instructional vineyard. Access to a greenhouse, while not required, would be highly desirable. The enology curriculum will require a laboratory space suitable for the fermentation science lab, and wine-making courses. The enology space should include a space for the storage of fermenting wine that can be secured.

Library holdings should include access to professional journals in viticulture and enology.

l. Intended delivery mode for program. For programs delivering any of its coursework via 1) alternative formats, 2) outsourcing, and/or 3) a consortial relationship, the program proposal must demonstrate compliance with requirements as

specified by the U.S. Department of Education and articulated in the Higher Learning Commission's policies. To demonstrate this compliance, the proposing department must submit a statement from the VPAA’s office.

The curriculum will be delivered using classroom lecture formats, supplemented with applied-learning laboratories.

m. For Professional, Technical or Other Programs, the justification must include:

(1) Rationale for program to be in the PTO category.

(2) Statement as to how the curriculum aligns to the requirements or recommendations of the nationally recognized accrediting, licensing, certifying or professional organization.

(3) Rationale for the program to exceed 60 credit hours, if applicable.

(4) Rationale for prescribing Applied Studies courses, if applicable.

(5) Explanation as to how a transfer student with an AA degree in the discipline of that program can graduate by completing only an additional 60 hours.

Not applicable.

TABLE 1: ENROLLMENT PROJECTIONS

Name of Program: Viticulture and Enology

Degree Title Viticulture and Enology

Name of Institution: Colorado Mesa University

DEFINITIONS:

Academic year is the period beginning July 1 and concluding June 30.

Headcount projections represent an unduplicated count of those students officially admitted to the program and enrolled at the institution during the academic year.

FTE is defined as the full-time equivalent number of those students majoring in the program, regardless of the classes enrolled, during the academic year.

Program graduate is defined as a student who finishes all academic program requirements and graduates with a formal award within a particular academic year.

SPECIAL NOTES:

To calculate the annual headcount enrollment, add new enrollees to the previous year headcount and subtract the number who graduated in the preceding year. Adjust by the anticipated attrition rate.

To calculate FTE, multiply the number of students times the projected number of credit hours degree seeking students will be typically enrolled in per year and divide by 30.

The data in each column is the annual **unduplicated** number of declared program majors. Since this table documents program demand, course enrollments are not relevant and shall not be included in the headcount or FTE data.

		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Full Implementation
1-a	In-state Headcount	5	14	20	25	30	30
1-b	Out-of-State Headcount	2	3	6	6	10	10
2	Program Headcount	7	17	26	31	40	40
3-a	In-state FTE	5.5	14	20	25	30	30
3-b	Out-of-State FTE	2.2	3	6	6	10	10
4	Program FTE	7.7	17	26	31	40	40
5	Program Graduates		5	12	20	25	30

_____ _____

Signature of Governing Board Officer Date

TABLE 2: PHYSICAL CAPACITY ESTIMATES

Name of Program: _____Viticulture and Enology_____

Name of Institution: _____Colorado Mesa University_____

Purpose: This table documents the physical capacity of the institution to offer the program and/or the plan for achieving the capacity. Complete A or B.

Part A

I certify that this proposed degree program can be fully implemented and accommodate the enrollment projections provided in this proposal without requiring additional space or renovating existing space during the first five years.

_____ _____

Governing Board Capital Construction Officer Date

Part B

	Column 1	Column 2	Column 3		Column 4		Column 5	Column 6
ASSIGNABLE SQUARE FEET	TOTAL NEEDED	AVAILABLE	RENOVATION		NEW CONSTRUCTION		LEASE/ RENT	REVENUE SOURCE*
TYPE OF SPACE			Immed	Future	Immed	Future		
Classroom	800	Yes						
Instructional Lab	800	Yes						
Offices	400	Yes						
Study								
Special/ General Use	2 acres						Yes	
Other	1000					Yes		
TOTAL	3000	Yes						

* Capital Construction Fund (CCF), Research Building Revolving Fund (RBRF), Gift (GIFT), Grant (GR), Auxiliary Fund (AUX)

Attach a narrative describing the institutional contingency plan that addresses the space requirements of the proposed program or alternative delivery options, in the event that the request for capital construction or renovation is not approved.

_____ _____

Governing Board Capital Construction Officer Date

Approved Policy I-B-10 June 5, 2003

TABLE 3 – PROJECTED EXPENSE AND REVENUE ESTIMATES

All cost and revenue projections should be in constant dollars (do not include an inflation factor).

		ESTIMATED AMOUNT IN DOLLARS (PV)				
		Year 1	Year 2	Year 3	Year 4	Year 5
Operating Expenses:						
1	Faculty	$50,000	$60,000	$60,000	$75,000	$75,000
2	Financial Aid specific to program					
3	Instructional Materials	$10,000	$10,000	$10,000	$15,000	$15,000
4	Program Administration					
5	Rent/Lease					
6	Other Operating Costs					
7	Total Operating Expenses	$60,000	$70,000	$70,000	$90,000	$90,000
Program Start-Up Expenses						
8	Capital Construction		$25,000			
9	Equipment Acquisitions	$15,000		$20,000		
10	Library Acquisitions					
11	Total Program Start-Up Exp.	$15,000	$25,000	$20,000		
TOTAL PROGRAM EXPENSES		$75,000	$95,000	$90,000	$90,000	$90,000
Enrollment Revenue						
12	General Fund: State Support	$12,375	$34,650	$49,500	$61,875	$74,250
13	Cash Revenue: Tuition	$67,803	$158,962	$247,454	$291,497	$383,061
14	Cash Revenue: Fees					
Other Revenue						
15	Federal Grants					
16	Corporate Grants/Donations					
17	Other fund sources *					
18	Institutional Reallocation **					
TOTAL PROGRAM REVENUE		$80,178	$193,612	$296,954	$353,372	$457,311

** If revenues are projected in this line, please attach an explanation of the specific source of the funds. If reallocated, the specific departments and the impact the dollars will have on the departments that will provide the reallocated dollars.

_____ _____ _____

Signature of Governing Board Financial Officer Title Date

Attachment A

(b1) Identify program student learning outcomes (SLOs)

VITICULTURE AND ENOLOGY, PROGRAM-LEVEL STUDENT LEARNING OUTCOMES:

Program Outcomes	Communication	Computational	Critical Thinking	Specialized Knowledge	Applied Learning	Other
Viticulture and Enology	Students will have the ability to accurately communicate information in written form (up to two pages), as well as be proficient in the use of electronic communication (email, etc.).	Students will have the ability to make calculations that are commonly used in the viticulture and enology industry.	Students will demonstrate the ability to make and defend managerial decisions that integrate specialized knowledge in the viticulture/ enology sciences, and related business practices.	Students will understand not only the general plant and fermentation sciences, they will be proficient in their applications related to viticulture and enology.	Students will be proficient in the application of commonly accepted practices in viticulture and enology.	Students will demonstrate professional behavior through their understanding and application of practices that promote the safety of the V&E workforce, as well as the food safety standards that support the production of a quality product for the consumer.

(b2) Identify linkage of program SLOs to institutional SLOs

INSTITUTIONAL-LEVEL STUDENT LEARNING OUTCOMES, and
PROGRAM-LEVEL STUDENT LEARNING OUTCOMES for VITICULTURE AND ENOLOGY:

Institutional SLOs	The CMU/WCCC associate degree graduate will be able to: 1. Locate, gather and organize evidence on an assigned topic addressing a course or discipline-related question or a question of practice in a work or community setting. 2. Use program-level mathematical concepts and methods to understand, analyze, and explain issues in quantitative terms. 3. Make and defend claims in a well-organized, professional document and/or oral presentation that is appropriate for a specific audience. 4. Identify and gather the information/data relevant to the essential question, issue and/or problem and develop informed conclusions.					
	Communication	**Computational**	**Critical Thinking**	**Specialized Knowledge**	**Applied Learning:**	**Other:**
Department: WCCC – BASIS SLOs	Apply business communication using listening, verbal and written, and electronic forms that are needed for entry level employment	Apply Mathematical and applied physics concepts for industry to meet employment requirements	Research, evaluate, synthesize and apply information/data relevant to business, sciences, and technical careers	Demonstrate a knowledge of terminology, symbols, business practices, and principles and application of associated technical skills	Perform the necessary applied skill sets to fulfill the needs of entry level employment	Demonstrate ethical, civic, and work place responsibility as part of professional behavior.
Program: Viticulture and Enology SLOs	Students will have the ability to accurately communicate information in written form (up to two pages), as well as be proficient in the use of electronic communication (email, etc.). Related Institutional SLO: 1, 3	Students will have the ability to make calculations that are commonly used in the viticulture and enology industry. Related Institutional SLO: 2	Students will demonstrate the ability to make and defend managerial decisions that integrate specialized knowledge in the viticulture/ enology sciences, and related business practices. Related Institutional SLO: 4	Students will understand not only the general plant and fermentation sciences, they will be proficient in their applications related to viticulture and enology. Related Institutional SLO: 4	Students will be proficient in the application of commonly accepted practices in viticulture and enology. Related	Students will demonstrate professional behavior through their understanding and application of practices that promote the safety of the V&E workforce, as well as the food safety standards that support

					Institutional SLO: 1	the production of a quality product for the consumer. Related Institutional SLO: 1

(b3) Illustrate relationship of SLOs to proposed curriculum using curriculum map format.

RELATIONSHIP OF PROGRAM-LEVEL STUDENT LEARNING OUTCOMES and CURRICULUM:

Program SLOs	Communication	Computational	Critical Thinking	Specialized Knowledge	Applied Learning	Other
Viticulture and Enology	Students will have the ability to accurately communicate information in written form (up to two pages), as well as be proficient in the use of electronic communication (email, etc.).	Students will have the ability to make calculations that are commonly used in the viticulture and enology industry.	Students will demonstrate the ability to make and defend managerial decisions that integrate specialized knowledge in the viticulture/ enology sciences, and related business practices.	Students will understand not only the general agricultural and fermentation sciences, they will be proficient in their applications related to viticulture and enology.	Students will be proficient in the application of commonly accepted practices in viticulture and enology.	Students will demonstrate professional behavior through their understanding and application of practices that promote the safety of the V&E workforce, as well as the food safety standards that support the production of a quality product for the consumer.
AGRS 100	X			X	X	X
AGRS 100L		X		X	X	X
AGRS 101	X			X	X	
AGRS 106		X		X		X
AGRS 106L		X		X		X
AGRS 130		X	X	X	X	X
AGRS 130L		X	X			X
AGRS 131		X	X	X		
AGRS 131L		X	X			
AGRS 165				X	X	X
AGRS 165L				X		
AGRS 170				X	X	
AGRS 189					X	
AGRS 202	X	X	X			
AGRS 205		X	X	X	X	
AGRS 240				X	X	X
AGRS 240L				X	X	X
AGRS 245				X	X	X
AGRS 245L				X		

AGRS 255		X	X	X	X	
AGRS 255L		X		X		
AGRS 260			X	X	X	
AGRS 265			X		X	

(b4) Identify planned assessments for the program SLO

COLORADO MESA UNIVERSITY

Program Outcome and Assessment Plan

Program Name: Agriculture

Date:08/17/2015

Program Outcomes	Courses/Educational Strategies Indicate if outcome is Beginning(B), Developing(D) or Advanced(A)	Assessment Method(s)	Time of Data Collection/ Person Responsible	Results of Assessment	Actions Taken
Outcome #1 Students will have the ability to accurately communicate information in written form (up to two pages), as well as be proficient in the use of electronic communication (email, etc.).	**AGRS 100, Practical Crop Production (D)** **Students will develop a Crop Production Summary presentation using either Powerpoint or MS Word, and submit it to the faculty member via email for approval.**	**What: Crop Production Summary** **How: When received via email, the Crop Production Summary will be assessed for accuracy of information, and quality of writing and presentation.**	**Who: AGRS 100 Faculty** **When: Fall and Spring semesters. Assignment due the last week of the semester.**		

Outcome #2 Students will have the ability to make calculations that are commonly used in the viticulture and enology industry.	**AGRS 205, Farm and Ranch Management (D)**	**What: Balance Sheet analysis** **How: Student will demonstrate the ability to calculate a Current Ratio, and Debt/Asset Ratio.**	**Who: AGRS 205 Faculty** **When: Spring semester**		
Outcome #3 Students will demonstrate the ability to make and defend managerial decisions that integrate specialized knowledge in the viticulture/ enology sciences, and related business practices.	**AGRS 205, Farm and Ranch Management (A)**	**What: Integrated Financial Statement Project** **How: Student will create a spreadsheet containing relevant financial statements, and analyses for an agricultural enterprise.**	**Who: AGRS 205 Faculty** **When: Spring Semester**		
Outcome #4 Students will understand not only the general agricultural and fermentation sciences, they will be proficient in their applications related to	**AGRS 255, Viticulture Harvest and Post-harvest Management** **Students will create and submit a harvest and**	**What: Viticulture Harvest and Post-harvest Management plan** **How: When received via email, the Plan will be**	**Who: AGRS 255 Faculty** **When: Fall semester**		

viticulture and enology.	**post-harvest management plan.**	**assessed for accuracy of information, and quality of writing and presentation.**			
Outcome #5 Students will be proficient in the application of commonly accepted practices in viticulture and enology.	**AGRS 205, Farm and Ranch Management (A)**	**What: Integrated Financial Statement Project** **How: Student will create a spreadsheet containing relevant financial statements, and analyses for an agricultural enterprise.**	**Who: AGRS 205 Faculty** **When: Spring Semester**		
Outcome #6 Students will demonstrate professional behavior through their understanding and application of practices that promote the safety of the V&E workforce, as well as the food safety standards that support the production of a quality product for the consumer.	**AGRS 189, Summer Viticulture Practicum (A)**	**What: Summer Viticulture Practicum Summary** **How: Student will submit a summary of the days/hours and activities that they completed as part of their summer practicum. The student's work ethic and productivity will be evaluated by the faculty in-charge.**	**Who: AGRS 189 Faculty** **When: Summer semester**		

2016 - 2017 PETITION/PROGRAM SHEET
Degree: Associate of Applied Science
Major: Viticulture and Enology

About This Major . . . The Viticulture and Enology curriculum is designed to provide the entrepreneurial and technical skills necessary to manage a profitable, environmentally sound, vineyard and/or winemaking business. Students learn the fundamentals of sustainable viticulture, focusing on cultivars that are suitable for Colorado, as well as the science of fermentation, and the fundamentals of producing and testing wine. Emphasis is placed on entrepreneurial and practical field training. As part of their education, students will participate in the establishment and management of a vineyard, and the production of wine. Graduates are qualified for employment in a variety of positions associated with viticulture and winemaking businesses.

This program will provide the student with an understanding of the viticulture and enology industry, the principles and science underlying operation and control decisions, and financial practices and measures common to the businesses. The graduate will understand the technical aspects of the work, the responsibilities of the work and the importance of safety in this vitally important career.

For more information on what you can do with this major, go to http://www.coloradomesa.edu/wccc/programs.html

All CMU associate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply business communication using listening, verbal and written and electronic forms that are needed for entry level employment. (Communication Fluency)
2. Apply mathematical and applied physics concepts for industry to meet employment requirements. (Quantitative Fluency)
3. Research, evaluate, synthesize and apply information/data relevant to business, sciences and technical careers. (Critical Thinking)
4. Demonstrate knowledge of terminology, symbols, business practices, and principles and application of technical skills. (Specialized Knowledge)

NAME:_____ **STUDENT ID #:**_____

LOCAL ADDRESS AND PHONE NUMBER:_____

_____ **( )** _____

I, (Signature)_____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I have read and understand the policies listed on the last page of this program sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

_____ 20_____
Signature of Advisor Date

_____ 20_____
Signature of Department Head Date

_____ 20_____
Signature of Registrar Date

DEGREE REQUIREMENTS:

- Minimum 66 semester hours total (A minimum of 16 taken at CMU in no fewer than two semesters)
- A cumulative grade point average of 2.0 or higher must be maintained for all courses taken and a "C" or better must be achieved in coursework toward major content area.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

ESSENTIAL LEARNING REQUIREMENTS (Minimum 15 semester Hours) See the current catalog for a list of courses that fulfill the requirements below. If a course is on the Essential Learning list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the Essential Learning requirement. The Essential Learning capstone course and co-requisite Essential Speech course (required for bachelor's degrees) cannot be used as options for the below requirements.

Course No	Title	Sem.hrs	Grade	Term/Trns
Communication (6 semester hours)				
ENGL 111	English Composition	3	_____	_____
ENGL 112	English Composition	3	_____	_____
-OR-				
ENGL 111	English Composition **and**	3	_____	_____
SPCH 101	Interpersonal Communication **or**	3	_____	_____
SPCH 102	Speechmaking	3	_____	_____

Mathematics: (Minimum 3 semester hours) Minimum MATH **107** Career Mathematics or higher

_____	____ _____	3	_____	_____
Course No	Title	Sem.hrs	Grade	Term/Trns

Social Sciences, Natural Science, Fine Arts or Humanities (Minimum 6 semester hours)

_____	____ _____	3	_____	_____
_____	____ _____	3	_____	_____

WELLNESS REQUIREMENT (2 semester hours)

KINE 100	Health and Wellness	1	_____	_____
KINA 1____	_____	1	_____	_____

ASSOCIATE OF APPLIED SCIENCE: COURSE REQUIREMENTS
(49 semester hours)

Core Classes

AGRS 100	Practical Crop Production	3	_____	_____
AGRS 100L	Practical Crop Production Lab	1	_____	_____
AGRS 101	Fermented Beverages	3	_____	_____
AGRS 106	Fermentation Science	2	_____	_____
AGRS 106L	Fermentation Science Lab	1	_____	_____
AGRS 130	Vineyard Estab/Mgmt	3	_____	_____
AGRS 130L	Vineyard Est/Mgmt Lab	1	_____	_____
AGRS 131	Water and Irrig: Prin/Practices	2	_____	_____
AGRS 131L	Water and Irrig Lab	1	_____	_____
AGRS 165	Winemaking I	3	_____	_____
AGRS 165L	Winemaking I Lab	1	_____	_____
AGRS 170	Sensory Analysis	3	_____	_____
AGRS 189	Viticulture Practicum	3	_____	_____
AGRS 202	Winery Operation & Mrkting	3	_____	_____
AGRS 205	Farm/Ranch Management	3	_____	_____
AGRS 240	Intro Soil Science	3	_____	_____
AGRS 240L	Intro Soil Science Lab	1	_____	_____
AGRS 245	Winemaking II	2	_____	_____
AGRS 245L	Winemaking II Lab	1	_____	_____
AGRS 255	Vit. Harvest/Post Harvest Mgt	2	_____	_____
AGRS 255L	Vit. Harvest/Post Harvest Lab	1	_____	_____
AGRS 260	Plant Propagation	3	_____	_____
AGRS 265	Integrated Plant Health	3	_____	_____

SUGGESTED COURSE SEQUENCING FOR THE ASSOCIATE OF APPLIED SCIENCE IN VITICULTURE AND ENOLGOY

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

Freshman Year

First Semester		Hours
AGRS100	Practical Crop Production	3
AGRS100L	Practical Crop Production Lab	1
AGRS 240	Intro to Soil Science	3
AGRS 240	Intro to Soil Science Lab	1
AGRS 260	Plant Propagation	3
ENGL 111	English Composition	3
MATH 107	Career Mathematics	3
		17

Second Semester		Hours
AGRS 101	Fermented Beverages	3
AGRS 106	Fermentation Science	2
AGRS 106L	Fermentation Science Lab	1
AGRS 130	Vineyard Estab and Mgmt	3
AGRS 130L	Vineyard Estab and Mgmt Lab	1
AGRS 131	Water and Irrigation	2
AGRS 131L	Water and Irrigation	1
ENGL 112	English Composition	3
		16

Summer Term		Hours
AGRS189	Viticulture Practicum	3

Sophomore Year

Third Semester		Hours
AGRS 165	Winemaking I	3
AGRS 165L	Winemaking I Lab	1
AGRS 170	Sensory Analysis	3
AGRS 202	Winery Operations & Marketing	3
AGRS 255	Vit. Harvest & Post Harvest Mgmt.	2
AGRS 255L	Vit. Harvest & Post Harvest Mgmt. Lab	1
SBS/NS/FA/Hum/Essential Learning		3
		16

Fourth Semester		Hours
AGRS 265	Integrated Plant Health	3
AGRS 205	Farm/Ranch Management	3
AGRS 245	Winemaking II	2
AGRS 245L	Winemaking II Lab	1
SBS/NS/FA/Hum/ Essential Learning		3
KINE 100	Health & Wellness	1
KINA 1XX		1
		14

POLICIES:

1. Please see the catalog for a complete list of graduation requirements.
2. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.** You must turn in your "Intent to Graduate" form to the Registrar's Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December**.
3. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature. Finally, the Department Head will submit the signed forms to the Registrar's Office. (Students cannot handle the forms once the advisor signs.)
4. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your "Intent to Graduate" does not automatically move to a later graduation date.
5. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

Course Additions

AGRS 101 Credit Hours 3

Course Title: Fermented Beverages

Abbreviated Title: Fermented Beverages

Contact hours per week: Lecture 3 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 2250 Student preparation minutes: 4500

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☑ No ☐

CUAR 179, Wine, Spirits, and Beer, is offered through the Culinary Arts program. This course is similar in offering basic palate training for wine and beer. The major differences between the proposed course and CUAR 179 include the goals of the audience

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in winemaking will be required for this course.

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Introduction to the fermented beverage industry, relationships between field produce and finished product, and basic sensory attributes and palate training. Emphasizes the wine industry, but also includes cider and beer.

Justification:

This course serves as an introductory course for the AAS in Viticulture and Enology program. Students will gain an overview of the wine and grape industry from both a product and production perspective.

Topical course outline:

- Fermented beverage producing countries/regions
- Grape growing countries/regions in the world
- Environmental variables
- Varietals/cultivars/hybrids and wines
- Price/Quality continuum
- Basic palate training
- Processes and Ingredients

Student Learning Outcomes:

1) Identify the major wine, beer, and cider producing countries of the world.
2) Identify the major growing regions in those countries.
3) Identify the major grape varieties/cultivars/hybrids, region in which they are grown, and the wines produced from them.
4) Identify the characteristics of those wines and what makes them unique to their regions.
5) Describe how differences of soil, climate and vinification practices are reflected in the wines.
6) Analyze the price/quality continuum as it relates to various wine types and styles from different

regions.
7) Analyze the price/quality continuum as it relates to various beers and ciders.
8) Identify the major sensory factors when tasting and evaluating fermented beverages.
9) Identify the major ingredients in feremented beverages, and the relationships to taste.
10) Describe the common production processes.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 106 Credit Hours 2

Course Title: Fermentation Science

Abbreviated Title: Fermentation Science

Contact hours per week: Lecture 2 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 1500 Student preparation minutes: 3000

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 106L, Fermentation Science Laboratory

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in the chemistry and winemaking will be required for this course.

Additional equipment required: Yes ☑ No ☐

Carboys for fermentation, and chemical analysis equipment

Additional lab facilities required: Yes ☑ No ☐

A space for storage of fermenting liquid.

Course description for catalog:

Examination of fundamentals of microbiology and chemistry as they apply to fermented beverages, with an emphasis on the winemaking industry.

Justification:

This course serves as an introduction to the fundamentals of microbiology and chemistry as they apply to fermented beverages, with an emphasis on the winemaking industry. Emphasis is placed on organisms and elements impacting winemaking including ingredient analysis/fermentation/production chemicals, and properties of gasses/liquids, pH, and pressure; how they influence production and end products.

Topical course outline:

- Science of the fermentation process
- Chemical properties
- Analytical measures
- Stages of fermentation in wine, beer, and cider
- Environmental variables in fermentation
- Ingredients

Student Learning Outcomes:

1) Describe the basic microbiology and chemical processes of fermentation related to wine, and other fermented beverages.
2) Identify the basic scientific measures associated with winemaking and other fermented beverages.
3) Describe the purpose and function of analytical processes.
4) Identify the functions and types of yeast, and the innoculation process.
5) Describe the stages of fermentation in the production of wine, beer, and cider.

AGRS 106L Credit Hours 1

Course Title: Fermentation Science Laboratory

Abbreviated Title: Fermentation Science Lab

Contact hours per week: Lecture Lab 2 Field Studio Other

Type of Instructional Activity: Laboratory: Academic/Clinical

Academic engagement minutes: 1500 Student preparation minutes: 750

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 106, Fermentation Science

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in the chemistry and winemaking will be required for this course.

Additional equipment required: Yes ☑ No ☐

Carboys for fermentation, and chemical analysis equipment

Additional lab facilities required: Yes ☑ No ☐

A space for storage of fermenting liquid.

Course description for catalog:

Application of fundamentals of microbiology and chemistry as they apply to fermented beverages, with an emphasis on the winemaking industry.

Justification:

This course serves as a laboratory for the introduction to the fundamentals of microbiology and chemistry as they apply to fermented beverages, with an emphasis on the winemaking industry. Emphasis is placed on organisms and elements impacting winemaking including ingredient analysis/fermentation/production chemicals, and properties of gasses/liquids, pH, and pressure; how they influence production and end products.

Topical course outline:

- o Fermentation process
- o Chemical property analysis
- o Analytical measures
- o Stages of fermentation in wine, beer, and cider
- o Analysis of environmental variables in fermentation
- o Ingredient analysis

Student Learning Outcomes:

1) Assess the basic microbiology and chemical processes of fermentation related to wine, and other fermented beverages.
2) Conduct basic scientific measures associated with winemaking and other fermented beverages.
3) Apply common analytical processes in the fermentation process.
4) Demonstrate the preparation of yeast, and the innoculation process.
5) Manage the stages of fermentation in the production of wine, beer, and cider.

AGRS 130 Credit Hours 3

Course Title: Vineyard Establishment and Management

Abbreviated Title: Vineyard Estab/Mgmt

Contact hours per week: Lecture 3 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 2250 Student preparation minutes: 4500

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Lab, or consent of instructor.

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 130L, Vineyard Establishment and Management Laboratory

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☑ No ☐

In this course, students will establish a new vineyard, and conduct vineyard management practices commonly applied in the winter/spring seasons. Appropriate tools and equipment will be required.

Additional lab facilities required: Yes ☑ No ☐

This course will require a site for a vineyard for educational purposes.

Course description for catalog:

Exploration of vineyard establishment and winter/spring vineyard management practices. Emphasis on site selection, vineyard layout, vine varieties, soil preparation, planting methods, plant establishment and training/manipulation, and tools and equipment.

Justification:

This course serves to provide the student with an understanding of the variables related to the planning and establishment of a new vineyard, and the vineyard management practices commonly conducted in the winter and spring seasons.

Topical course outline:

- Importance of grape world
- Grape botany: genus, species, history, taxonomy
- Grape varietal review
- Vine growth processes
- Site selection
- Tillage and planting techniques
- Trellising
- Fertility and Irrigation
- Common pests and disease
- Pruning, suckering, thinning, canopy management
- Bud assessment

- o Bloom, and pollination
- o Cover crops
- o Yield

Student Learning Outcomes:

1) Describe the history of the genus Vitis.
3) Identify critical site selection elements: heat units, soils, slopes, micro- climates, and crop history.
4) Identify planting techniques for new grape vines.
5) Describe the function of the major growth management functions in quality grape production, including:
   a. Pruning
   b. Suckering.
   c. Thinning.
   d. Canopy management.
6) Identify common grape pests and their control.
7) Calculate and assess water requirements during the growing season.
8) Describe the early growth stages, including grape bloom, and pollination
9) Describe the stages of growth, and determine the related fertility needs of the vine.
10) Assess the importance of grower/vintner relationship.
11) Describe post-planting management options, including pest control and cover crops.
12) Identify cover crop options.
13) Identify common pests and diseases, and control strategies.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 130L Credit Hours 1

Course Title: Vineyard Establishment and Management Laboratory

Abbreviated Title: Vineyard Estab/Mgmt Lab

Contact hours per week: Lecture Lab 2 Field Studio Other

Type of Instructional Activity: Laboratory: Academic/Clinical

Academic engagement minutes: 1500 Student preparation minutes: 750

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Lab, or consent of instructor.

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 130, Vineyard Establishment and Management

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☑ No ☐

In this course, students will establish a new vineyard, and conduct vineyard management practices commonly applied in the winter/spring seasons. Appropriate tools and equipment will be required.

Additional lab facilities required: Yes ☑ No ☐

This course will require a site for a vineyard for educational purposes.

Course description for catalog:

Application of vineyard establishment and winter/spring vineyard management practices. Emphasis on site selection, vineyard layout, vine varieties, soil preparation, planting methods, plant establishment and training/manipulation, and tools and equipment.

Justification:

This course serves to provide the student with applied experiences in the planning and establishment of a new vineyard, and the vineyard management practices commonly conducted in the winter and spring seasons.

Topical course outline:

- Grape botany: genus, species, history, taxonomy
- Enterprise Budgeting
- Grape varietal selection
- Management of vine growth processes
- Site selection
- Site preparation and planting
- Trellis establishment
- Fertility and Irrigation
- Pests and disease management
- Pruning, suckering, thinning, canopy management
- Bud assessment

- o Bloom and pollination
- o Establishing cover crops
- o Estimating yield

Student Learning Outcomes:

1) Create a site plan for a new vineyard.
2) Evaluate critical site selection elements: heat units, soils, slopes, micro- climates, and crop history.
3) Plant/establish new grape vines.
4) Demonstrate the major vine management functions, including:
   a. Pruning.
   b. Suckering.
   c. Thinning.
   d. Canopy management.
5) Identify common grape pests and determine appropriate control strategies.
6) Calculate and address irrigation requirements during the growing season.
7) Assess grape bloom, pollination, and then calculate fertility needs of new vines.
8) Select post-planting pest control and cover crop options.
9) Establish cover crops.
10) Identify common pests and diseases and apply appropriate control.

Discussions with affected departments:

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 131 Credit Hours 2

Course Title: Water and Irrigation: Principles and Practices

Abbreviated Title: Water and Irrigation

Contact hours per week: Lecture 2 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 1500 Student preparation minutes: 3000

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Lab, or consent of instructor.

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 131L, Water and Irrigation Laboratory

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☑ No ☐

In this course, students will establish and maintain an irrigation system in a vineyard. Appropriate tools and equipment will be required.

Additional lab facilities required: Yes ☑ No ☐

This course will require a site for a vineyard for educational purposes.

Course description for catalog:

Exploration of water, soil, and plant relationships; water quality assessment; principles of irrigation, methods, and systems.

Justification:

Water, and its management through irrigation systems is a critical element to a successful vineyard, and the production of quality wine grapes. This course serves to provide the student with an understanding of the critical relationships between water, soil, and plants; the assessment of water quality; the principles of irrigation and water management; methods and systems commonly found in vineyards; and variables related to the planning and establishment of a new irrigation system.

Topical course outline:

- Water, soil, plant relationships
- Water quality factors
- Irrigation principles
- Irrigation water management variables
- Irrigation methods and systems
- Water pumps and filters
- Irrigation system planning

Student Learning Outcomes:

1) Explain the relationships between water, soil, plants, and related environmental factors.
2) Interpret the results of a water quality analysis.
3) Describe the principles of irrigation as they relate to vineyards.
4) Assess issues related to irrigation water management, including availability and plant needs, seasonal variations in quality, and timing of irrigation.
5) Identify types of irrigation systems.
6) Create a site plan for irrigation.
7) Assess irrigation system options based on site characteristics, and budget.
8) Create a maintenance schedule for an existing irrigation system.
9) Describe the functions of water pumps and filtration systems.
10) Calculate water pump requirements based on site characteristics.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 131L Credit Hours 1

Course Title: Water and Irrigation: Principles and Practices Laboratory

Abbreviated Title: Water and Irrigation Lab

Contact hours per week: Lecture Lab 2 Field Studio Other

Type of Instructional Activity: Laboratory: Academic/Clinical

Academic engagement minutes: 1500 Student preparation minutes: 750

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Lab, or consent of instructor.

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 131, Water and Irrigation: Principles and Practices

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☑ No ☐

In this course, students will establish and maintain an irrigation system in a vineyard. Appropriate tools and equipment will be required.

Additional lab facilities required: Yes ☑ No ☐

This course will require a site for a vineyard for educational purposes.

Course description for catalog:

Applications in water, soil, and plant relationships; water quality assessment; principles of irrigation, methods, and systems.

Justification:

Water, and its management through irrigation systems is a critical element to a successful vineyard, and the production of quality wine grapes. This course serves to provide the student with applied experiences related to the relationships of water, soil, and plants; assessment of water quality; principles of irrigation and water management; methods and systems commonly found in vineyards; and variables related to the planning and establishment of a new irrigation system.

Topical course outline:

- Water, soil, plant relationships
- Assessing water quality
- Irrigation water management
- Irrigation methods and systems
- Selecting, installing, and maintaining water pumps and filters
- Irrigation system planning
- Irrigation system establishment and maintenance

Student Learning Outcomes:

1) Apply the relationships between water, soil, plants, and related environmental factors, in the selection of an irrigation system.

2) Draw a water sample, and interpret the results of a water quality analysis.
3) Apply the principles of irrigation water management, including methods of determining plant requirements, and availability, seasonal variations in quality, and managing the timing of irrigation.
4) Select an irrigation system based on site characteristics, and budget.
5) Install an irrigation system.
6) Conduct regular maintenance of an existing irrigation system.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 165 Credit Hours 3

Course Title: Winemaking I

Contact hours per week: Lecture 3 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 2250 Student preparation minutes: 4500

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☐ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Fermented Beverages; and AGRS 100L, Practical Crop Production Laboratory; AGRS 106, Fermentation Science, and AGRS 106L, Fermentation Science Laboratory

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 165L, Winemaking I Laboratory

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in the chemistry and winemaking will be required for this course.

Additional equipment required: Yes ☑ No ☐

Carboys and related fermentation equipment, chemical analysis equipment, grape presses, fruit processing and filtration equipment

Additional lab facilities required: Yes ☑ No ☐

A space and equipment for storage of fermenting liquid.

Course description for catalog:

Exploration of the winemaking process; winemaking principles such as alcoholic and malo-lactic fermentations; juice additions; and winery hygiene and safety. Includes pre-harvest analyses, grape harvest, fruit processing, and filtration.

Justification:

This course provides the student with knowledge of the critical steps in the beginning stages of the winemaking process.

Topical course outline:

- Pre-harvest fruit selection and analysis
- Winery safety and sanitation
- Red, white and rosé wine production
- Alcoholic and malo-lactic fermentations
- Juice addition calculations

Student Learning Outcomes:

1) Identify pre-harvest fruit selection and juice analysis factors
2) Identify critical processes in winery safety and sanitation
3) Define steps in red, white, and rosé wine grape processing
4) Summarize alcoholic and malo-lactic fermentations, and critical points of analysis

5) Calculate and determine juice additions

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 165L Credit Hours 1

Course Title: Winemaking I Laboratory

Contact hours per week: Lecture Lab 2 Field Studio Other

Type of Instructional Activity: Laboratory: Academic/Clinical

Academic engagement minutes: 1500 Student preparation minutes: 750

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☐ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Fermented Beverages; and AGRS 100L, Practical Crop Production Laboratory; AGRS 106, Fermentation Science, and AGRS 106L, Fermentation Science Laboratory

Prerequisite for other course(s): Yes ☑ No ☐

Co-requisites: Yes ☑ No ☐

AGRS 165, Winemaking I

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in the chemistry and winemaking will be required for this course.

Additional equipment required: Yes ☑ No ☐

Carboys and related fermentation equipment, chemical analysis equipment, grape presses, fruit processing and filtration equipment

Additional lab facilities required: Yes ☑ No ☐

A space and equipment for storage of fermenting liquid.

Course description for catalog:

Applications of the winemaking process; winemaking principles such as alcoholic and malo-lactic fermentations; juice additions; and winery hygiene and safety. Includes pre-harvest analyses, grape harvest, fruit processing, and filtration.

Justification:

This course provides the student a guided experience in the making of wine. This experience is critical to successful employment, or self-employment in the wine industry.

Topical course outline:

- Pre-harvest fruit selection and analysis
- Grape harvest
- Winery safety and sanitation
- Red, white and rosé wine production
- Alcoholic and malo-lactic fermentations
- Juice addition calculations

Student Learning Outcomes:

1) Assess fruit in pre-harvest stage
2) Harvest, properly handle and store grapes
3) Create a safe and sanitary work environment
4) Process red, white, and rosé wine grapes

5) Conduct alcoholic and malo-lactic fermentations, and measure critical points of analysis
6) Select and integrate juice additions

Proposed by: Benjamin Keefer Expected Implementation: Fall 2016

AGRS 170 Credit Hours 3

Course Title: Sensory Analysis

Abbreviated Title: Sensory Analysis

Contact hours per week: Lecture Lab Field Studio Other 4.5

Type of Instructional Activity: Lecture/Laboratory: Vocational/Technical

Academic engagement minutes: 3375 Student preparation minutes: 3375

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☐ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Fermented Beverages; and AGRS 100L, Practical Crop Production Laboratory; AGRS 106, Fermentation Science, and AGRS 106L, Fermentation Science Laboratory

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in winemaking, and analysis, will be required for this course.

Additional equipment required: Yes ☑ No ☐

Wine tasting glassware, sensory equipment and samples.

Additional lab facilities required: Yes ☐ No ☑

A space that is in a quiet setting, and well-ventilated, is required for this course.

Course description for catalog:

Exploration of sensory training specific to wine production with a focus on the details of olfactory and taste transduction mechanisms. The class will focus on specific wine varietals, use of oak in winemaking, secondary fermentation, characteristics, and individual wine component threshold identification.

Justification:

The ability to analyze wine, and draw conclusion related to it development, is a critical element to the success of the winemaker.

Topical course outline:

- Sensory dimensions of wine.
- Analysis panels.
- Basic tasting skills.
- Wine aroma.
- Taste system/Basic tastes.
- Tastes in white wine analysis.
- Tastes in red wine analysis.
- Taste threshold testing analysis.
- Wine fault identification analysis.
- Wine and food interactions analysis.
- Red, white, sparkling, fortified, full bodied red, full bodied white analysis.
- Light and medium bodied white and red analysis.
- Old world vs. new world red and white.

Student Learning Outcomes:

1) Identify sensory evaluation factors of both red and white wine varietals and their differences by observation, olfaction and tasting of over 200 wines.
2) Distinguish between various wine faults and recognize their influence on the perception of wine.
3) Analyze wines, differentiate various aroma and flavor markers for different varietals and defend individual perception in various wines.
4) Critique, appraise, differentiate and identify various wines.
5) Explain basic tastes, method of transduction and their relevance to wine.

Proposed by: Benjamin Keefer Expected Implementation: Fall 2016

AGRS 189 Credit Hours 3

Course Title: Viticulture Practicum

Abbreviated Title: Viticulture Practicum

Contact hours per week: Lecture Lab Field 9 Studio Other

Type of Instructional Activity: Internship/Practicum

Academic engagement minutes: 6750 Student preparation minutes:

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☑ Summer ☑

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 130, Vineyard Establishment and Managment, and AGRS 130L, Vineyard Establishment and Management Laboratory, or consent of instructor.

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Exploration of vineyard maintenance, through a combination of applied learning and work experience facilitated by experienced growers.

Justification:

Practical experience in the application of vineyard management practices is critical to the success, and future employment of the student.

Topical course outline:

o Application of vineyard management practices

Student Learning Outcomes:

1) Apply vineyard management practices appropriate to the site, and season.
2) Demonstrate an understanding of the importance of good work ethic, and employee/employer relationships.

Proposed by: Benjamin Keefer Expected Implementation: Fall 2016

AGRS 202 Credit Hours 3

Course Title: Winery Operations and Marketing

Abbreviated Title: Winery Operat./Mrkting

Contact hours per week: Lecture 3 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 2250 Student preparation minutes: 4500

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☐ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☐ No ☑

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with experience in viticulture and/or winemaking will be required.

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Analysis of the annual winery operations cycle (includes equipment; health, safety, and sanitation; regulatory compliance requirements; and management of waste, storage, and distribution systems), and product distribution, sales, and marketing. Includes visitation to existing winemaking businesses.

Justification:

The grape harvest is the culmination of the growing season. The quality of the harvest is dependent on the management and care of the fruit as it matures, and the timing of the harvest. Proper post-harvest care of the vineyard is the first step towards the success of the next growing season.

Topical course outline:

- The annual cycle of winemaking
- Basic tasks required for winemaking
- Winery equipment and supplies
- Annual plan for winery management
- Budgets and planning
- Budget development
- Marketing plan
- Labor management
- Health and safety issues
- Employee handbooks
- Immigration Law
- Record keeping
- The legal structure of businesses
- Legal compliance
- Design and layout of winery areas
- Current issues in winery management
- Winery and wine compliance regarding state and federal laws

Student Learning Outcomes:

1) Analyze winery management practices.
2) Compare alternative winery management practices.
3) Critique potential winery management issues.
4) Create an annual plan of winery operations.
5) Create a budget for winery operations.
6) Analyze a winery marketing plan and how successfully it fits into a winery's operating parameters.
7) Explain the process to evaluate employees.
8) Explain the nature of successful personnel management and management's responsibilities to its employees.
9) Critique the integration of production and sales functions within the winery, and identify potential efficiencies to be achieved for optimal operation.
10) Identify compliance issues regarding state and federal laws.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 245 Credit Hours 2

Course Title: Winemaking II

Contact hours per week: Lecture 2 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 1500 Student preparation minutes: 3000

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 165, Winemaking I, and AGRS 165L, Winemaking I Laboratory

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☑ No ☐

AGRS 245L, Winemaking II Laboratory

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in the chemistry and winemaking will be required for this course.

Additional equipment required: Yes ☑ No ☐

Carboys and related fermentation equipment, chemical analysis, filtration, and bottling equipment.

Additional lab facilities required: Yes ☑ No ☐

A space and equipment for storage of wine.

Course description for catalog:

Exploration of wine filtration, and post-fermentation wine stewardship techniques. Also includes the principles of wine composition, wine analytical techniques, and the relevance of these analyses to winemaking decisions.

Justification:

This course provides the student with knowledge of the critical steps in the winemaking process.

Topical course outline:

- Sparkling wine production, theory and practice
- Fortified wine production theory
- Methods of wine stabilization, theory and practice
- Options in bottling wine
- Industry seminars and visitation
- Oak chemistry and sensory analysis

Student Learning Outcomes:

1) Identify techniques in the stabilization and clarification of white wine.
2) Explain the processes in fining and filtration of white and red wine.
3) Identify proper fining and acidification techniques.
4) Identify post-fermentation winemaking techniques and practices.
5) Explain processes for proper sanitation.
6) Explain the basics of TQM techniques for winemaking.
7) Identify wine filtration techniques and concepts.

Proposed by: Benjamin Keefer Expected Implementation: Fall 2016

AGRS 245L Credit Hours 1

Course Title: Winemaking II Laboratory

Abbreviated Title: Winemaking II Lab

Contact hours per week: Lecture Lab 2 Field Studio Other

Type of Instructional Activity: Laboratory: Academic/Clinical

Academic engagement minutes: 1500 Student preparation minutes: 750

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 165, Winemaking I, and AGRS 165L, Winemaking I Laboratory

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☑ No ☐

AGRS 245, Winemaking II

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with a background in the chemistry and winemaking will be required for this course.

Additional equipment required: Yes ☑ No ☐

Carboys and related fermentation equipment, chemical analysis, filtration, and bottling equipment.

Additional lab facilities required: Yes ☑ No ☐

A space and equipment for storage of wine.

Course description for catalog:

Applications of wine filtration, and post-fermentation wine stewardship techniques. Also includes the principles of wine composition, wine analytical techniques, and the relevance of these analyses to winemaking decisions.

Justification:

This course provides the student with knowledge of the critical steps in the winemaking process.

Topical course outline:

- Applications in sparkling wine production
- Applications in fortified wine production
- Methods of wine stabilization
- Bottling wine, including actual bottling of student made wines
- Industry seminars and visitation
- Sensory analysis of wine

Student Learning Outcomes:

1) Apply techniques in the stabilization and clarification of white wine.
2) Conduct the processes in fining and filtration of white and red wine.
3) Apply fining and acidification techniques and processes.
4) Determine and apply post fermentation winemaking techniques and practices.
5) Model area sanitation practices, and bottling sterility.

6) Apply quality management strategies in winemaking.
7) Demonstrate wine filtration techniques and concepts.

Proposed by: Benjamin Keefer Expected Implementation: Fall 2016

AGRS 255 Credit Hours 2

Course Title: Viticulture Harvest and Post-harvest Management

Abbreviated Title: Viticulture Harvest Mgmt

Contact hours per week: Lecture 2 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 1500 Student preparation minutes: 3000

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☐ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Laboratory, or consent of instructor.

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☑ No ☐

AGRS 255L, Viticulture Harvest and Post-harvest Management Laboratory

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☑ No ☐

In this course, students will conduct a grape harvest, and fall vineyard management practices. Appropriate tools and equipment will be required.

Additional lab facilities required: Yes ☑ No ☐

This course will require a site for a vineyard for educational purposes.

Course description for catalog:

Exploration of late summer and fall vineyard operations including: maturity sampling, bird netting, and fall harvest. Includes preparation of the vineyard for winter.

Justification:

The grape harvest is the culmination of the growing season. The quality of the harvest is dependent on the management and care of the fruit as it matures, and the timing of the harvest. Proper post-harvest care of the vineyard is the first step towards the success of the next growing season.

Topical course outline:

- Grape quality
- Netting and fruit protection
- Fall irrigation management
- Harvest considerations
- Grape harvest
- Post-harvest care of grapes
- Post-harvest care of vines and alleys
- Post-harvest equipment maintenance
- Post-harvest trellis maintenance

Student Learning Outcomes:

1) Identify factors of quality commonly associated with wine grapes.
2) Interpret the results of a grape analysis.

3) Identify methods of protecting fruit in the vineyard from birds and related pests.
4) Explain fall irrigation water management considerations.
5) Identify factors that impact the timing of the grape harvest.
6) Create a harvest management plan.
7) Explain factors associated with the post-harvest care, storage, and transportation of grapes.
8) Identify fall vineyard management considerations/tasks.
9) Identify common maintenance considerations for the vineyard and related equipment.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 255L Credit Hours 1

Course Title: Viticulture Harvest and Post-harvest Management Laboratory

Abbreviated Title: Vitic. Harvest Mgmt Lab

Contact hours per week: Lecture Lab 2 Field Studio Other

Type of Instructional Activity: Laboratory: Academic/Clinical

Academic engagement minutes: 1500 Student preparation minutes: 750

Intended semesters for offering this course: Fall ☑ J-Term ☐ Spring ☐ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Laboratory, or consent of instructor.

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☑ No ☐

AGRS 255, Viticulture Harvest and Post-harvest Management

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☑ No ☐

Faculty with an educational background in agriculture and/or horticulture, and experience in viticulture will be required.

Additional equipment required: Yes ☑ No ☐

In this course, students will conduct a grape harvest, and fall vineyard management practices. Appropriate tools and equipment will be required.

Additional lab facilities required: Yes ☑ No ☐

This course will require a site for a vineyard for educational purposes.

Course description for catalog:

Application of late summer and fall vineyard operations including: maturity sampling, bird netting, and fall harvest. Includes preparation of the vineyard for winter.

Justification:

The grape harvest is the culmination of the growing season. The quality of the harvest is dependent on the management and care of the fruit as it matures, and the timing of the harvest. Proper post-harvest care of the vineyard is the first step towards the success of the next growing season.

Topical course outline:

- Grape quality
- Netting and fruit protection
- Fall irrigation management
- Grape yield assessment
- Harvest considerations
- Grape harvest
- Post-harvest care of grapes
- Post-harvest care of vines and alleys
- Post-harvest equipment maintenance
- Post-harvest trellis maintenance

Student Learning Outcomes:

1) Conduct a grape analysis, and interpret the results.
2) Apply bird-netting, and other methods of protecting fruit in the vineyard.
3) Assess the potential grape yield.
4) Determine irrigation water management procedures that are appropriate to the timing of the harvest, and fall vineyard care.
5) Demonstrate proper methods in harvesting wine grapes.
6) Demonstrate care of the wine grape, post-harvest, and considerations related to its storage and transportation.
7) Explain fall vine management procedures.
8) Demonstrate common fall vineyard maintenance tasks.
9) Apply common fall equipment and vineyard structure maintenance tasks.
10) Winterize an irrigation system.

Proposed by: Benjamin Keefer, Ph.D. Expected Implementation: Fall 2016

AGRS 265 Credit Hours 3

Course Title: Integrated Plant Health Management

Abbreviated Title: Integrated Plant Health

Contact hours per week: Lecture 3 Lab Field Studio Other

Type of Instructional Activity: Lecture

Academic engagement minutes: 2250 Student preparation minutes: 4500

Intended semesters for offering this course: Fall ☐ J-Term ☐ Spring ☑ Summer ☐

Essential Learning Course: Yes ☐ No ☑

Prerequisites: Yes ☑ No ☐

AGRS 100, Practical Crop Production, and AGRS 100L, Practical Crop Production Laboratory, or consent of instructor.

Prerequisite for other course(s): Yes ☐ No ☑

Co-requisites: Yes ☐ No ☑

Requirement or listed choice for any program of study: Yes ☑ No ☐

WCCC AAS, Sustainable Agriculture: 1310

WCCC AAS, Viticulture and Enology

Overlapping content with present courses offered on campus: Yes ☐ No ☑

Additional faculty FTE required: Yes ☐ No ☑

Additional equipment required: Yes ☐ No ☑

Additional lab facilities required: Yes ☐ No ☑

Course description for catalog:

Multi-faceted approaches to the management of plant health through analysis of soil characterisitcs, nutrients, irrigation, and integrated pest management techniques for reducing pest susceptibility and enhancing crop production yield and quality.

Justification:

Successful plant health management is one of the most important, and complex tasks of the grower. This course seeks to integrate the knowledge and skills the student obtained in AGRS 100 and 100L, and apply them in a holistic approach to plant health management.

Topical course outline:

1. Diagnosing plant problems; the diagnostic process
2. Plant protective features and factors responsible for enhancing a plant's protective features
3. Plant responses to stress; injury, damage, mortality
4. Stress management of root, stem, and leaf tissue to reduce susceptibility to plant pests and problems and enhance plant quality and yield
5. Management of fungal and fungal-like pathogens based on an understanding of requirements for inoculation and penetration
6. Management and prevention of insect, mite, and nematode plant damage
7. Identification and prevention of plant virus and phytoplasma-caused plant diseases
8. The use of pesticides and biologics to enhance plant growth and yield

Student Learning Outcomes:

1) Explain management options for biotic and environmental factors responsible for yield reduction and loss of crop quality
2) Explain soil management techniques and how it affects root health and disease potential
3) Explain soil microbial activity and its effect on protection of roots from disease organisms
4) Explain the need for irrigation scheduling to ensure soil has adequate oxygen for root health

5) Explain how and why nutrients ensure metabolic activity is adequate for production of plant protective substances
6) Identify management options necessary to control/prevent diseases caused by fungal and fungal-like organism
7) Identify virus and phytoplasmas-caused diseases and explain steps required for prevention
8) Explain nematode, insect, and mite management options
9) Explain how to incorporate Integrated Pest Management concepts into crop production programs

Proposed by: Benjamin Keefer Expected Implementation: Fall 2016