COWLEY COLLEGE
& Area Vocational Technical School

COURSE PROCEDURE FOR

> **INTRODUCTION TO RESEARCH METHODS**
> **NAS 4126   1 Credit Hour**

Student Level:
This course is open to students on the college level in either their freshman or sophomore year.

Catalog Description:

NAS4126 – INTRODUCTION TO RESEARCH METHODS (1 hr)
This course is designed to provide students majoring in natural sciences and related fields with a hands-on introduction to research, including the fundamental process and theoretical need.

Prerequisites:
Instructor Approval

Controlling Purpose:
This course is designed to provide students majoring in natural sciences and related fields with hands-on introduction to research, including the fundamental process and theoretical need.

Learner Outcomes:
Upon completion of the course, the student will have an understanding of the nature, design, and implementation of the research process.

Units Outcomes and Criterion Based Evaluation Key for Core Content:
The following defines the minimum core content not including the final examination period. Instructors may add other content as time allows.

Evaluation Key:

A   =   All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.

B   =   All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.

C   =   All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of inadequacy in his background.

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D	=	A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
F	=	Failing, will be computed in GPA and hours attempted.
N	=	No instruction or training in this area.

UNIT 1: INTRODUCTION TO RESEARCH

Outcomes: Outcomes: Upon completion of this unit, the student will be able to assess the basic requirements for research projects.

A	B	C	D	F	N	Specific Competencies Demonstrate the ability to:
						Identify the necessity for research
						Describe the main components of a research process
						Explain and analyze ethics standards in research
						Identify necessary skills to the research process
						Distinguish between qualitative and quantitative approaches
						Identify and utilize various information sources such as books, journals, and computers

UNIT 2: STEPS OF THE RESEARCH PROCESS

Outcomes: Upon completion of this unit, the student will be able to construct and evaluate the components of a research project.

A	B	C	D	F	N	Specific Competencies Demonstrate the ability to:
						Identify and evaluate research problems
						Construct and evaluate literature reviews
						Construct and evaluate the research purpose, questions, objectives, and/or hypotheses
						Outline the various methods of data collection
						Outline the various methods of interpreting and analyzing data
						Outline the various methods of reporting data

UNIT 3: RESEARCH DESIGN

Outcomes: Upon completion of this unit, the student will be able to select and implement appropriate research designs for various studies.

A	B	C	D	F	N	Specific Competencies Demonstrate the ability to:
						Identify the key components of an experiment
						Outline the various methods of research design
						Identify strengths and limitations of various research designs
						Identify elements of validity and quality control

Projects Required:
Critiques of various research studies
Construction of a mini-proposal for a research study

Textbook:
None

Materials/Equipment Required:
Computer Access

Attendance Policy:
Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:
The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:
Based on classroom occupancy

Course Timeframe:
The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

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Refer to the following policies:

402.00 Academic Code of Conduct
263.00 Student Appeal of Course Grades
403.00 Student Code of Conduct

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability, which may impact work in this class which requires accommodations, contact the Disability Services Coordinator.

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