



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**UNDERGRADUATE RESEARCH
NAS 4127 1 Credit Hour**

Student Level:

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

Catalog Description:

NAS4127 – UNDERGRADUATE RESEARCH (N) (1 hr)

This course is designed to provide students majoring in natural sciences and related fields an opportunity to actively participate in the discovery or application of new knowledge and evaluate its significance to related disciplines.

Prerequisites:

NAS 4126 Introduction to Research Methods and Instructor Approval

Controlling Purpose:

This course is designed to provide students majoring in natural sciences and related fields an opportunity to actively participate in the discovery or application of new knowledge and evaluate its significance to related disciplines.

Learner Outcomes:

Upon completion of the course, the student will have an understanding of the design, methodology, techniques, analysis, and presentation of a formal research project.

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.

- 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: Design and Implementation of a Research Plan						
Outcomes: Upon completion of this unit, the student will be able to construct a research plan.						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Identify the purpose of the proposed research
						Identify and analyze prior research studies associated with proposed research
						Identify key methods needed to complete the proposed research
						Identify necessary skills to complete the proposed research

UNIT 2: Implementation of Research						
Outcomes: Upon completion of this unit, the student will be able to design and implement the research project with the guidance of the faculty member.						
A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Identify and control variables in the research project
						Complete key methods associated with the research project
						Maintain a comprehensive log of research activities

UNIT 3: Analyze and Present Collected Data

Outcomes: Upon completion of this unit, the student will be able to analyze collected data and professionally present findings in written and oral forms.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						Apply relevant statistical analysis to collected data
						Construct graphs and/or charts to efficiently display data
						Write a professional paper that adheres to prescribed format
						Construct a professional oral presentation with accompanying visuals
						Describe the implications of the research findings

Projects Required:

Construction of a research plan

Implementation and successful advancement on a research project

Written and/or oral presentation of research results

Textbook:

A Textbook is not required for this course.

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.

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.