

Florida Department of Education

**COURSE DESCRIPTION - GRADES 9-12, ADULT
SUGGESTED COURSE PERFORMANCE OBJECTIVES**

| | |
|-------------------------------|--|
| Subject Area: | Gifted |
| Course Number: | 7965010 |
| Course Title: | Research Methodology for Students who are Gifted |
| Previous Course Title: | Research Methodology for the Gifted |
| Credit: | Multiple |

- A. Major Concepts/Content.** The purpose of this course is to provide students who are gifted with special skills and experiences to do independent research and projects, and to provide opportunities for in-depth studies under the direction of selected faculty.

The content should include, but not be limited to, the following:

- research methodology appropriate for a selected discipline or area of study
- use of primary and secondary resource materials
- skills in expression and communication
- skills in the use of technology to search for information, manage projects, and produce documents and multimedia products

This course shall integrate the Sunshine State Standards and Goal 3 Student Performance Standards of the Florida System of School Improvement and Accountability as appropriate to the individual student and to the content and processes of the subject matter.

- B. Special Note.** This entire course may not be mastered in one year. A student may earn multiple credits in this course. The particular course requirements that the student should master to earn each credit must be specified on an individual basis. Multiple credits may be earned sequentially or simultaneously.

Instructional activities used to meet course requirements and address individual student needs may occur in schools, communities, museums, institutions of higher education, or other appropriate scientific or cultural organizations. Instruction in these settings may require that students acquire specialized knowledge and skills, including the use of advanced technology, special tools, and equipment; terminology; and methodologies essential to the student's research.

Course Number: 7965010 - Research Methodology for Students who are Gifted

The performance objectives listed below are designed to provide teachers with ideas for short-term objectives for instructional planning. The performance objectives are not intended to be exhaustive of all the possible short-term objectives a student may need in this multiple credit course. Other objectives should be added as required by an individual student.

C. Course Requirements.

After successfully completing this course, the student will:

1. Use appropriate technical language related to the research process.

- 1.1. Identify the meaning of specialized vocabulary, acronyms, and symbols used in the research process (e.g., data, hypothesis testing, statistical analysis, review of literature).
- 1.2. Identify and use sources of explanation of technical language related to the research process (e.g., professionals, dictionaries, glossaries, help sections).
- 1.3. Use specialized vocabulary, acronyms, and symbols effectively in communicating needs and results related to one's own use of the research process.

2. Demonstrate mastery of knowledge and skills involved in the research process.

- 2.1. Demonstrate understanding of the nature and characteristics of the research process and its application in various fields and disciplines (e.g., hypothesis testing, identifying variables, recording and analyzing data, making inferences, drawing conclusions).
- 2.2. Demonstrate understanding of characteristics and uses of different types of research (e.g., experimental research, longitudinal research, ethnographic research, trend analysis, program evaluation, qualitative research).
- 2.3. Demonstrate understanding of common purposes of research (e.g., in-depth investigation of issues or phenomena, identification of patterns and trends, replication of previous experimental studies, evaluation of how well a theory or proposition predicts or explains an outcome, comparison of different theories or propositions).
- 2.4. Describe attributes or characteristics of a problem, issue, or topic that make it appropriate for research (e.g., complexity of issue, pressing need, availability of information, potential solutions).

Course Number: 7965010 - Research Methodology for Students who are Gifted

2.5. Demonstrate understanding of methods used to obtain information and gather data in the research process.

- Specify: _____ review of literature
_____ direct observations
_____ focus groups, interviews, and surveys
_____ modeling and simulations
_____ other: _____

2.6. Demonstrate understanding of ethical practices in gathering data and using information for research.

- Specify: _____ rights of subjects
_____ copyright laws
_____ citations and references
_____ issues of plagiarism and falsification of data
_____ other: _____

2.7. Demonstrate understanding of methods used to manipulate and analyze information and data in the research process (e.g., identifying patterns and trends, statistical analysis, semantic or concept mapping, flow-charts, tree diagrams, identifying relationships—causal or correlational).

3. Use technological skills in the research process (e.g., use of information databases and the Internet; use of telecommunications; use of word processing, spreadsheet, and graphic software).

3.1. Demonstrate knowledge and skills needed to access electronic information databases on software or from the Internet when investigating selected topics or issues for research.

- Specify: _____ using hardware, software, and network connectivity programs
_____ conducting searches, e.g., using the Boolean process
_____ downloading, copying, and printing information
_____ citing and documenting sources of information
_____ other: _____

3.2. Demonstrate knowledge and skills needed to use telecommunications when investigating selected topics or issues for research.

- Specify: _____ using hardware, software, and network connectivity programs
_____ using e-mail, list-serves, chat services
_____ using teleconferences
_____ citing and documenting sources of information
_____ other: _____

Course Number: 7965010 - Research Methodology for Students who are Gifted

- 3.3. Demonstrate knowledge and skills needed to use word processing, spreadsheet, and graphics software when investigating selected topics or issues for research.

Specify: _____ using hardware and software
_____ making backups
_____ other: _____

4. Collect, analyze, and synthesize information from primary and secondary sources on an identified topic.

- 4.1. Identify problem, issue, or topic for research.
- 4.2. Use strategies to identify a range of subtopics, related factors, historical background, or other concerns to be addressed in the research process (e.g., generating questions to be answered, brainstorming, conducting a preliminary literature review).
- 4.3. Select and use an appropriate organizational framework to structure issues or subtopics and identifying a research design.
- 4.4. Identify distinguishing characteristics and purposes of primary and secondary sources of information.
- 4.5. Conduct an extensive search of primary and secondary sources of information related to issues and subtopics identified in the research design.
- 4.6. Complete an in-depth review of literature using strategies to obtain and evaluate relevant information from available sources (e.g., notetaking, paraphrasing, outlining, using direct quotations).
- 4.7. Create or select instruments or procedures to accurately gather data and make observations as appropriate to the research design (e.g., structured interviews, surveys, observation scales, direct measurements of variables, models and simulations).
- 4.8. Record and compile data accurately in accordance with research design.
- 4.9. Select and use appropriate methods and tools for data analysis (e.g., spreadsheets, calculators).
- 4.10. Analyze information gathered to identify patterns, trends, causal or correlational relationships, or other relevant findings.
- 4.11. Evaluate results and draw conclusions based on findings of literature review and results obtained from data analysis.
- 4.12. Report results of literature review and data analysis using a format and organizational structure that is appropriate for the audience and purposes of the research (e.g., written report, oral presentation, media presentation).

Course Number: 7965010 - Research Methodology for Students who are Gifted

- 4.13. Use appropriate technology to prepare a report on the results of the research (e.g., word processor, desktop publishing software, presentation software, camcorder, tape recorder).
- 4.14. Use the writing process in preparing a report on the results of the research (e.g., prewriting, drafting, peer review, revising, editing, and publishing).
- 4.15. Evaluate own presentation skills in communicating results of research using feedback from self, peers, authentic audiences, and teachers.
Specify: _____ written report—clarity, organization, formatting
 _____ oral presentation—fluency, voice control, eye contact, clarity
 _____ media presentation—impact of images, color, and layout

5. Complete a project involving research according to a plan and timeline.

- 5.1. Use a systematic planning process to identify tasks and sequence of steps needed for completing a research project.
- 5.2. Select and use planning tools to support the planning process (e.g., project management software, planners).
- 5.3. Identify resources needed to accomplish tasks identified in plan (e.g., tools, materials, information).
- 5.4. Prioritize and schedule tasks to complete research project within expected timeframe.
- 5.5. Identify quality standards or expectations for final product including documentation of research process.
- 5.6. Establish and follow a procedure to monitor own progress according to plan and quality standards or expectations and make adjustments to plan as circumstances require.