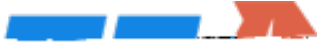## Approved Innovative Course

- *Districts must have local board approval to implement innovative courses*
- *Innovative courses may meet state elective credit only*
- *CTE Innovative courses may not be the final course in a coherent sequence for an endorsement*
- *Course requirements must be met without modification*

collecting data first-hand or from reputable websites, GIS aims to use scientific methods to find solutions to various problems and issues. students

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)

(4)   The student demonstrates knowledge and understanding of what GIS is and the use of GIS technology in different career fields. The student is expected to:

   (A)   identify the historical and contemporary developments in GIS;

   (B)   identify the basic components of GIS; and

   (C)   identify appropriate application of GIS technologies in different career fields.

(5)   The student demonstrates knowledge and appropriate use of database software. The student is expected to:

   (A)   use database software to design and construct a relational database using a geographic data model;

   (B)   use joins, hyperlinks, and relational linking within the database;

   (C)   demonstrate proficiency in data depiction and classification;

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Approved Innovative Course

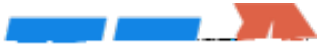- 059 Tc [((.23qs)C)0.253 0 Td ( )TjS3984 0 Td 0 cs 2.5784 0 Td

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emergency response. Additionally, this course provides instruction in the use of data from satellite technologies and promotes critical thinking skills in analyzing data. The course promotes collaboration, problem solving, and communication skills as well.

Major resources and materials:

GIS uses a combination of
- Computer lab
- Industry standard software
- Spatial Data

GIS does not involve "canned maps" but, instead, it involves the ability to construct maps showing answers to user-defined questions based on collected data and defined parameters. The software draws the integration of data: geographic coordinates ("where things are") and sets of attributes ("what things are like"), processed according to rules set by the user. This requires high computer power since students will analyze, manipulate, and visualize vast amounts of data in order to understand relationships, patterns, and trends. It is recommended that this introductory class include class work using standards-based textbooks, hands-on projects, and case studies to learn basic GIS terminology, career field applications, and the use of GIS software for project development and management.

Recommended course activities:

Students master GIS concepts t
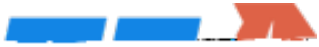
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Suggested methods for evaluating student outcomes:

(1) Written exams
(2) Projects, presentations, and group participation
(3) Evaluation of oral and written communication skills

Teacher qualifications:

(1) Any business or office education certificate.
(2) Business and Finance: Grades 6-12.
(3) Business Education: Grades 6-12.
(4) Secondary Industrial Arts (Grades 6-12).
(5) Secondary Industrial Technology (Grades 6-12).
(6) Technology Education: Grades 6-12.
(7) Technology Applications: Early Childhood-Grade 12.
(8) Technology Applications: Grades 8-12.
(9) Trade and Industrial Education: Grades 6-12. This assignment requires appropriate work approval.
(10) Trade and Industrial Education: Grades 8-12. This assignment requires appropriate work approval.
(11) Vocational Trades and Industry. This assignment requires appropriate work approval.
(12) Computer Science: Grades 8-12.
(13) Secondary Computer Information Systems (Grades 6-12).

Additional information: