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| **Course Name/Number:** CI6006 STEM Education Capstone | | | |
| **Description:** This capstone course requires students to design, implement, and evaluate a STEM instructional plan. The lessons must integrate at least two of the STEM disciplines in an interactive, collaborative plan that is supported by social constructivist theory and follows universal design for learning principles | | | |
| **Credit Hours:** 1-3 | | | |
| **Required or Elective:** Required for Choose Ohio First STEM Education Fellows | | | |
| **Faculty Members who Teach the course:** Sally Moomaw  **Prerequisites:** Completion of all required COF coursework  **Textbook(s):** None  **Resource Materials:** Provided as needed to assist individual students | | | |
| **Marker Assignments:** Lesson Plan; Reflection Paper; Presentation | | | |
| **Learning Outcomes:** | | | |
| ***Upon completion of this course, the student will be able to:***  ***How is this outcome assessed?*** | | | |
| 1. Candidates will be able to develop and implement a STEM educational plan for early childhood, middle school, or special education students, depending upon their program of instruction.  Lesson Plan Rubric | | | |
| 2. Candidates will be able to document and evaluate the results of the STEM lesson.  Reflection Paper | | | |
| 3. Candidates will be able to present research findings in a public forum.  Presentation Rubric | | | |
| 4. Candidates will be able to develop, implement, and evaluate STEM instructional plans through a UDL lens.  Lesson Plan; Reflection Paper | | | |
| 5. Candidates will be able to utilize social constructivist theory in the development, implementation, and evaluation of STEM instructional plans  Lesson Plan; Reflection Paper | | | |
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| **Alignment with Transformation Initiative:** | | | |
| In view of this conceptual framework and our urban mission, the goal for our Transformation Initiative is ***to improve the performance of students in high needs schools by preparing educators who recognize the moral imperative to meet the needs of each student. We will prepare educators who are committed to each student, caring about each individual, and competent in evidence-based and data driven instruction.*** Themes addressed:   * Evaluation of learning * Universal Design for Learning * Application of social constructivist theory | | | |
| **Alignment with Conceptual Framework:** | | | |
| This course addresses these institutional standards: Preparing candidates who are able to use technology to support their practice. | | | |
| **Alignment with Specialized Program Association:** | | | |
| This course aligns with the Ohio Standards for Gifted Endorsement in these ways: | | | |
| **Alignment with Ohio Standards for the Teaching Profession:** | | | |
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| **Alignment with State Requirements: Gifted Endorsement program** | | | |
| **Attendance Policies:** Attendance for this class is required. Missing more than one class will negatively affect your final grade in the course. For class preparation, students are expected to come on time, complete the reading/assignments, prepare answers to the questions in preparation of the meeting, complete in-class assignments, and participate in a lively class discussion. | | | |
| **Academic Integrity Policy** The University Rules, including the Student Code of Conduct, and other policies of the department, college, and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism, cheating, or falsifying field work will be dealt with according to the severity of the misconduct. Dishonesty in any form may result in a failing grade in a course and/or suspension or dismissal from a program (e.g., graduate or undergraduate). | | | |
| **Electronic Communication Policy;** All communication outside of class will be conducted via email to the student’s bearcat online account. Replies will be within 72 hours, whenever possible. At times I am engaged in national activities that preclude access to email. | | | |
| **Grading: Description of Assessment and/or Evaluation of Student Learning:**  Grading Scale  A = 950 - 1000 points A- = 900 – 949.9 points B+ = 850 – 899.9 points B = 800 – 849.9 points B- = 750 – 799.9 points C+ = 700 – 749.9 points C = 650 – 699.9 points C- = 600 – 649.9 points  F = <600 points  Topics: | | | |
| ***Week*** |  | |
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| 14 |  | |
| Exam Week |  | |

**Special Needs Policy** – ―If you have a disability (e.g., visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability, etc.) which may influence your performance in this course, you must meet with the Disability Services Office (DSO) to arrange for reasonable accommodations to ensure an equitable opportunity to meet all the requirements of this course. If you require accommodations due to disability, please contact DSO at 513-556-6823, Campus Location: 210 University Pavilion. You will be provided an Accommodation Form indicating your accommodation needs for the quarter. Please present this form to me AS SOON AS POSSIBLE to ensure your accommodation needs are discussed, agreed upon, and provided.‖ (see http://www.uc.edu/aess/programs\_services/disability.html).

**Religious Observance and Class Attendance** – ―Any UC student who is unable to attend classes or participate in any examination, study or work requirement on some particular day(s) because of his or her religious belief should be given the opportunity either to make up the work that was missed or to do alternative work that is intrinsically no more difficult than the original exam or assignment — provided that the makeup work does not create an unreasonable burden upon University of Cincinnati and its faculty. Upon request and timely notice, students should be provided reasonable accommodation.‖ (see http://www.uc.edu/registrar/policies\_and\_procedures/religious\_observances\_statement.html).

**"I" (Incomplete)** – No grades of ―Incomplete‖ will be assigned unless there are extreme circumstances AND a contract to complete the work is developed and signed by the student and the instructor prior to the last week of class. It is the student’s responsibility to approach the instructor with the request for an incomplete. Please note that a grade of ―I‖ will automatically be converted to an ―F‖ grade one calendar year after the initial grade was assigned. (see http://www.uc.edu/registrar/faculty\_resources/grading\_scales.html).

**Copyright** – ―Copyright infringement is a violation of the Student Code of Conduct - Misuse of Information Technology. Students who are found to be illegally sharing files will be subject to a procedural review to determine responsibility under the Code. If responsible, this offense will become part of each student's permanent judicial file with the University.‖ (see http://www.uc.edu/conduct/Copyright\_Infringement.html).

**“AESS (Academic Excellence & Support Services)** provides comprehensive, student-centered and university-wide programs, resources and services designed to promote transformative academic excellence through individual and group support. AESS comprises Disability Services and the Learning Assistance Center. We encourage any student with a disability who needs academic assistance to contact Disability Services. Learning Assistance is here to help **all students** who need help with tutoring, study skills, or other services. Additionally, our services are designed to help all UC students become successful independent learners, as well as assist in the retention and graduation of all students. Disability services, tutoring, and other learning resources are **free** to students!‖ (see http://www.uc.edu/aess.html).