**Ihanktonwan Community College**

***Branch of Sinte Gleska University***

**Selected Topic in Science SC 301**

**Spring 2017 Monday 6-7pm Room 103**

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**No Book Is Required**

**Class Objectives**

Science topics taught using a workshop approach or individual problem based learning model. Topics will be of a timely nature.

-read about, discuss, and research issues of importance to teaching and learning science from multiple perspectives developing knowledge of strategies for continuous improvements

-discuss and examine the teaching and learning of science among diverse populations and identify ways that educational research informs expert teaching practices

-develop science lessons from a multicultural/social justice perspective

-read and analyze research pertinent to issues of teaching and learning science among diverse populations

-compare and contrast different approaches to teaching and learning of science and describe impacts of instruction on students with social, cultural, ethnic, cognitive, gender, and physical differences

-reflect on and discuss their own perspectives on science education with respect to the issues discussed in literature

**Topic of study in science education**

-problem solving

-role of computers/technology

-cooperative learning

-problem-based learning

-conducting experiments

-incorporating culture in science

**Schedule**

**1/17** Introduction

**1/24** What is your current perception of science education?

**1/31** Article on problem solving in science due with reaction

**2/7** Lesson including problem solving in science due

**2/14** Article on the roles of computers/technology in science due

**2/21** Lesson including computers/technology in science due

**2/28** Article on cooperative learning in science due

**3/7** Lesson including cooperative learning in science due

**3/14** Article on problem-based learning in science due

**3/21** spring break

**3/28** Lesson including problem-based learning in science due

**4/4** Article on conducting experiments in science due

**4/11** Lesson with conducting experiments due

**4/18** Article on incorporating culture in science due

**4/25 workday**

**5/2** Lesson on incorporating culture in science due

Final paper due

**Assignments**

Articles with journaling 25 points

Attendance 25 points

Lessons 25 points

Final Paper 100 points

Response to one classmate’s article in journal 10 points

**Grading Scale:**

100-90 A

89-80 B

79-70 C

69-60 D

Below 60 F

**Articles**

Students will be required to find six articles on selected topic in science education to reflect on. The reactions to each article will be written in a journal. Students must write a reaction at least one other student’s article in their journal for each article.

**Lessons**

Students will utilize the Madeline Hunter model to write a lesson covering each topic in articles

**Final Paper**

The final paper must include at least three of the topics discussed throughout the year. Documented evidence of their importance in science education must be in APA formant. There should be a minimum of 5 references cited on the reference page. The topic is what are the topics, why are they important to science education, and how would you implement them into your classroom.

**Teaching Philosophy/teaching methods**

I believe the fundamental goal of teaching is to foster learning. Learning takes place in many different circumstances and contexts. Although everyone is capable of learning, a student's desire to learn is a vital pre-condition to effectively mastering new concepts and skills. Humans have multiple learning styles: some learn best in lecture atmospheres, some are motivated by discussion, and others absorb best when they read and reflect on what they have read. The classroom setting can encourage or inhibit learning depending on the dominant learning style of each student. Accommodating different learning styles creates an atmosphere that is conducive to learning. Students take many of their learning habits from the instructor. If the instructor doesn't show interest in the subject and a passion for learning, students are less likely to put forth the effort to learn in that class. An instructor must convince students of his or her knowledge and expertise before they will show a willingness to learn.

My job, as an instructor, is to create an atmosphere that fosters learning. I am an instructor because I have a passion for guiding students through the learning process, in addition to a passion for the material I present. One of the best ways to foster learning is to demonstrate those feelings to my students. I encourage learning by creating a relaxed environment for students, stimulating conversation about concepts being presented and organizing material in a way that makes it easiest to understand. I treat subject matter as interconnected, emphasizing that everything students are learning fits together into a holistic understanding of the world, from which they develop their personal worldview. I believe this is best accomplished when I am demonstrating general research methodology. I demonstrate that learning how to find information applies to all areas of life and I use topics and examples that are multidisciplinary. Finally, I believe that respect for my students is one of the most important things I can show - not only to encourage their openness to the material I am presenting, but also to inspire them to respect each other and all other humans.

One of the most important concepts I hope to impart to students is that learning is a process that never ends. For me, the learning process includes improving myself professionally. I want to read more about formal learning theories to expand my understanding of how learning takes place. As I continue to instruct classes, I also aim to enhance my ease and confidence in front of classrooms and audiences. Finally, I plan to experiment with different methods and means of presenting information to classes in order to improve the learning atmosphere I create for students.

**Course Policies:**

All policies found in the student handbook will be followed. Students are required to familiarize themselves with the policy and procedures.

**Instructional Methods:**

Students will learn the subject through class lectures, discussions, class activities, reflection, writing, comparative analysis, and general class participation.

S**tudent Expectations**

Students are expected to be in class on time, prepared, participating in discussion, complete assignments when they are due, and exhibit those qualities and character of a professional teacher.

**Student Responsibilities**

1. **Attendance**-The attendance policies stated in the Ihanktonwan Community College Student Handbook will be strictly adhered to. **Successful completion** of this course is contingent upon attendance, participation, and completion of all course requirements, complied in a portfolio in a timely matter.
2. **Accountability**-All readings, presentations, and assignments must be ready when due in order to earn the maximum number of points allowed. The instructor reserves the right to deduct points for late work. After one week, a failing grade for that assignment may be given. Work handed in must be professional quality. A final grade will not be given unless a completed portfolio is handed in**. MOST IMPORTANTLY STUDENTS MUST UNDERSTAND THAT THEY ARE ULTIMATELY RESPONSIBLE FOR THEIR OWN LEARNING**
3. **CELL PHONE POLICY** Cell phone usage disrupts the learning process. All cell phones must be turned off and put away during class time. You may check your messages and/or make necessary phone calls during class breaks or after class is over. Thanks for your cooperation.
4. **DISABILITY STATEMENT** ICC strives to assist students with declared disabilities that may impact their learning. Please advise your instructor or academic advisor prior to the beginning of the class if you have special needs.

**Extended time** **will not be granted past finals week unless arrangements are made ahead of time with a valid reason.**

**Grade changes will not be granted without a class completion contract that is approved by me and the college administration.**

**I reserve the right to adjust this schedule as I deem necessary.**

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