



*The College of*  
**WILLIAM & MARY**

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**24907-EDUC 582: The New Science of Creativity  
Spring 2016**

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**4. Office:** Room 3122, 301 Monticello Avenue, SOE Building

**5. Office Hours:** Mondays: 10:00 am – 4:30 pm

By Appointment via Skype

**6. Classes:** 7:15 pm – 9:45 pm, Mondays, Room 2020

**7. Course Description**

This course is designed to explore the lives of innovators and the forces that caused the blossoming of their creative potential. The development of creativity in individuals varies. This variation is due to differences in individuals' life experiences. Understanding how these differences impact Creative Attitudes and Creative Thinking Skills will help develop creative potential in yourself and others. Helping individuals reach their full creative potential is very much like growing apple trees. My original gardening metaphor shows the three steps to innovation by cultivating Creative CATs (Climates, Attitudes & Thinking Skills). The steps are: Step 1: Cultivate Creative Climates; Step 2: Nurture Creative Attitudes; and Step 3: Apply Creative Thinking Skills. We look closely at how parents and educators cultivate Creative Climates and nurture Creative Attitudes in yourself and in children and how to apply Creative

Thinking Skills. We can help turn troublemakers around by showing surprisingly similar behaviors in the early lives of the following innovators: Albert Einstein, Steve Jobs, Nelson Mandela, Georgia O’Keeffe, and Marie Curie.

**8. Course Objectives:** At the completion of this course, you should be able to:

- 1) Explain the three practical and complete steps for producing innovation from the CATs model (first, cultivate Creative **C**limates; second, nurture Creative **A**ttitudes; and third apply Creative **T**hinking skills).
- 2) Compare the four Creative Climates (Soil, Sun, Storm & Space) that nurture the Creative Attitudes and how both innovators and creative underachievers are *made* through their Climates and Attitudes;
- 3) Compare and contrast the impacts of culture and cultural diversity on individuals’ attitudes, behaviors, and minds—including patriarchal culture, Asian culture, and Jewish culture;
- 4) Explain the impacts of individuals’ Creative Attitudes—which can seem either positive or negative—on their Creative Thinking Skills and their desire to use them;
- 5) Explain the *five* Soil Attitudes, *six* Sun Attitudes, *eight* Storm Attitudes, and *eight* Space Attitudes that enable the creative mind;
- 6) Explain ION Thinking Skills (Inbox, Outbox & Newbox) and the four seasons of ACP (Appletree Creative Processes).
- 7) Respond knowledgeably to the following questions:
  - Who is creative? Why some are more creative than others?
  - What is creativity? How is creativity different from talents or gifts?
  - Where is creativity? Where does creativity occur and why?

- How creativity is fostered? How is creativity killed? Why is creativity devalued in education?

## **9. Text Book:**

Kim, K. H. (2016). CATs: How Can We Recapture American Creative Climates, Creative Attitudes, and Creative Thinking Skills.

## **10. Course Requirements:**

### **1) Weekly Insightful Entry (35 points)**

- Post to Discussion Board an Insightful Entry each week of class corresponding to the week's assigned readings by Thursday at midnight. An Insightful Entry is a provocative statement of truth based on your experiences and readings. Each entry must be brief and meaningful and no more than 499 Words. Critique two other students' entries by Saturday at midnight. Each of the seven Insightful Entries will be worth five points each (total of 35 points). Two points are for the Critique and three points are for your Insightful Entry.
- You may use whatever format you wish, however, it would be helpful to determine how each of the readings answers (or doesn't answer) the questions in the Course Objectives. Address what you agree or disagree with and questions that you have. Refer to your pertinent experiences, thoughts, and readings outside of class. Don't just summarize; ask questions, argue, agree, synthesize, exemplify, etc. The key is to interact with the content.
- Questions to answer:
  - What you have learned
  - What you thought about
  - What you like or agree with
  - What you dislike or disagree with

- What you can apply to yourself or others
  - Your own examples related to the readings
  - Practical action plans using the readings
  - Suggestions for further development of the models
- You may use word processing, typing, diagram, drawing, etc. for your Insightful Entries.

**2) Co-Teaching (30 points).** Please select two chapters (among Chapters 3 – 9) that you think are the most critical to the CATs model.

- Each student will be the primary instructor for one chapter and supporting instructor for another chapter.
- Each student can only team with another student once.
- Compare and contrast to the other elements of the CATs model
- Why it is more critical than the others for innovation based on current research
- Tie it to a real world innovation to recognize the CATs model across fields.

**3) Final Project (30 points).** Please select a project that best meets your needs and interests related to the course content.

- Use the CATs model to describe an innovator's journey.
- Write a literature review about something related to the science of creativity and submit to a journal.

## **10. Course Requirements**

### **Final Grade (Total of 100 points)**

Your final grade will be based on seven Insightful Entries, two Co-teaching, Final Project, and Active Participation.

### **Active Participation**

- 5 points for perfect attendance, consistent timeliness, academic responsibility, and positive/constructive behavior in class.

## **11. General Course Expectations**

### **1) Grading Policy**

The following scale will be used in this course

A (94-100%)	B (84-86%)	C (74-76%)	D (64-66%)
A- (90-93%)	B- (80-83%)	C- (70-73%)	D- (60-63%)
B+ (87-89%)	C+ (77-79%)	D+ (67-69%)	F (59% & below)

### **2) Late Work Policy**

No work will be accepted after the posted due dates.

### **3) Academic Honesty and Confidentiality**

**Honesty:** The College's rules concerning plagiarism will be followed. You are expected to complete your own work and give appropriate credit when referencing work from other people.

**Confidentiality:** Because there will be various discussions related to a lot of research topics in class, class discussions should be confidential and not be repeated out of class.

### **4) Attendance Policy**

- It is important for you to be in class both to learn and to help others learn. Arriving late and/or leaving early interrupt the flow of the class and is unprofessional.
- It is important that you sign in for every class session, as the sign-in sheet will be my attendance roll. I will set out a sign-in sheet before class begins. If you come in after I

begin, it is your responsibility to sign in immediately after class, or during a break without disturbing the lesson. Otherwise, you will be marked absent for the class.

- If you miss class, it is your responsibility to determine what you missed during class and submit the appropriate work in a timely manner. It is unprofessional to expect me to review material from previous classes when you miss a class.
- Absences may not receive the attendance credit (1 extra point for Perfect attendance; 0 extra point for 1 absence, -0.5 point for 2 absences, -1 point for 3 absences, etc. If you have more than 3 absences, it would be better to drop the class. Each time you are late or leave early, I will count as an absence. I consider leaving early more disruptive than arriving late. Thus, if you are planning to leave early, you should notify me in advance and sit in the back.
- Every week, it is expected that you sit in a new seat, next to a new classmate.

### **5) Professional Writing**

Papers and tests should have few, if any, grammatical, spelling, or other mechanical errors.

If you are not a strong writer, be sure to use a proofreader. Assignments with many errors will receive a grade of C or lower because this is unacceptable writing for professionals in Education.

I will not correct all of your grammar/spelling errors in drafts or while grading. At most, I will point out errors through one or more examples in your paper. It is your responsibility to read and correct the entire paper prior to submission.

### **6) APA Formatting**

- Papers should be typed, double-spaced, 12-point font, Times New Roman, 1" margins, and have no spaces between sections.

- Your paper must start with a numbered cover page that includes (in order) project/study title, course number and title, your name, your Program, The College of William & Mary, date of submission, my name, and the semester (Fall 2013).
- All pages should have a page number with a running head on the top right corner.
- Papers not following the APA Style will receive a grade no higher than B.

### **7) Course Incompletes**

Incompletes will be given only: a) in extenuating circumstances; and b) after a student-initiated discussion with the instructor *prior* to the end of the semester. Generally, a student must have completed the majority of course work and have an average grade of "B" or better to be considered for an incomplete.

- In this course, you must have 84% (B) or better on the course requirements to qualify for an "I" grade.
- You must also present an acceptable reason (and accompanying documentation) for an extension and the date when your course requirements will be completed.

### **8) Students with Disabilities**

Pursuant to the Americans with Disabilities Act (ADA) of 1990, students with qualified disabilities will not be the objects of illegal discrimination in this class. If you have a documented disability (including psychological issues), please contact me immediately so that I can provide appropriate accommodations to the learning environment.

## **12. Course Content Table**

### **PART I: WHAT IS CREATIVITY?**

**Chapter 1. The Creativity Crisis:** describes my research into America's creativity crisis that spurred an explosive *Newsweek* cover story in 2010. This research has gained

notoriety in the media because it revealed that American creativity has been declining since 1990. A brief description of the results of the study; the causes of, reactions to, and consequences of the creativity crisis; and the trend of American education *toward* test-centric climates—*against* Creative Climates—are presented.

**Chapter 2. The Creativity Solution:** reveals the nature of creativity and presents my Creative CATs (Climate, Attitude & Thinking Skills) to achieve innovation. It starts with cultivating Creative Climates that nurture Creative Attitudes that enable Creative Thinking Skills, which are applied to achieve innovation.

## **PART II: WHAT ARE 4S CLIMATES AND ATTITUDES?**

Raised in a farming village, I know what makes plants grow strong and productive: diverse Soil, bright Sun, fierce Storms, and free Space. Similarly, the 4S Climates are needed for children’s creativity to flourish: Soil (Diverse Resources & Experiences), Sun (Inspiration & Encouragement), Storm (High Expectations & Challenges), and Space (Freedom to Be Alone & Unique). These Climates emerged from my synthesis and factor-analyses of empirical creativity studies and great innovators’ life stories.

**In Chapters 3–6,** each chapter starts with an introduction about an early life story of an innovator and how his or her early Creative Climates nurtured his or her Creative Attitudes and Creative Thinking Skills. **In each chapter, Step 1 is about cultivating Creative Climates;** it shows research findings about how to cultivate Creative Climates:

**Chapter 3. Soil Attitudes Nurtured in the Soil Climates: Albert Einstein** who changed the way we see the universe; and how parents and teachers of innovators (PTIs) cultivate Soil Climates (Diverse Resources & Experiences);



**Chapter 4. Sun Attitudes Nurtured in the Sun Climates: Apple cofounder Steve Jobs** who made computers a part of everyday human experience; and how PTIs cultivate Sun Climates (Inspiration & Encouragement);

**Chapter 5. Storm Attitudes Nurtured in the Storm Climates: Nelson Mandela** who achieved innovation by creating a democratic South Africa from a community that existed only in his imagination; and how PTIs cultivate Storm Climates (High Expectations & Challenges);

**Chapter 6. Space Attitudes Nurtured in the Space Climates: Georgia O’Keefe** who was an early force in American modernism that became independent from imitative European art and pioneered a woman’s artistic career in what was then a man’s world; and how PTIs cultivate Space Climates (Freedom to Be Alone & Unique).

**In Chapters 3–6, Step 2 is about nurturing Creative Attitudes:** Soil Attitudes in Chapter 3, Sun Attitudes in Chapter 4, Storm Attitudes in Chapter 5, and Space Attitudes in Chapter 6. Step 2 starts with a brief anecdote from my life illustrating how my own Creative Attitudes were encouraged/discouraged or how I encouraged/discouraged these Attitudes within my children. Then, I summarize what research says about each of the Attitudes and how each can contribute to Creative Thinking Skills. Finally, the end of Step 2 of each chapter presents innovators’ life examples of how each of the Attitudes seems negative.

### **PART III: HOW DO CULTURAL CLIMATES IMPACT CREATIVITY?**

**Chapter 7. Why Are Women Un-Creative and Men Creative?:** explores the impacts of gender-role stereotypes on women’s creativity. I use the life stories of Marie Curie—the first woman to win a Nobel Prize—and Mileva Marić—Albert Einstein’s first wife—to better understand the impact that male gender stereotypes have on women’s creativity. I compare how Curie’s 4S Climates nurtured her creativity, but Marić’s patriarchal Climates stifled her

creativity. This can explain why Curie won two Nobel prizes while Marić's creativity was trampled, despite the fact that both were extremely bright and rare female physicists with high creative potentials.

**Chapter 8. Why Are Asians Un-Creative and Jews Creative?:** explores how parenting in different cultures impacts creativity. I consider two specific parenting styles: Confucian parenting (including tiger mothers) and Jewish parenting. I examine Confucian parenting principles and how they impact Asians' creativity. I also explore how 4S Jewish parenting impacts Jewish creativity, which can explain why Jews have won the Nobel Prize 627 times more than Asians.

#### **PART IV: WHAT ARE ION THINKING SKILLS?**

**Chapter 9. ACP (Appletree Creative Process) and ION Thinking Skills (Inbox, Outbox & Newbox):** focuses on the creative process and Thinking Skills. I present my Appletree Creative Process (ACP) that consists of four seasons: Winter (Expertise Development & Needs Identification); Spring (Idea Generation, Subconscious Processing & Idea Evaluation); Summer (Synthesis & Transformation); and Fall (Presentation). I also present my ION Thinking Skills, which are Inbox, Outbox, and Newbox. Both the ACP and the ION Thinking Skills emerged from my extensive analyses of creativity-test scores and empirical studies and theories of creativity and intelligence.

#### **PART V: HOW CAN WE RECAPTURE AMERICAN CREATIVITY?**

Part V consists of five appendices. **Appendices 1–4** list research-based practical exercises and approaches for PTIs to cultivate each of the 4S Climates and recognize and nurture each of the 4S Attitudes in themselves and children. **Appendix 5** provides an extensive exercise lists for PTIs to apply the ION Thinking Skills to the ACP—reversing the creativity crisis and

achieving innovation. These appendices are designed for parents and educators to copy and carry them around and/or place them somewhere easily to see, so that they can practice them anytime, anyplace.

**Appendix 1. How to Cultivate Soil Climates**

**Appendix 2. How to Cultivate Sun Climates**

**Appendix 3. How to Cultivate Storm Climates**

**Appendix 4. How to Cultivate Space Climates**

**Appendix 5. How to Use ACP (Appletree Creative Process) and Apply ION**

**Thinking Skills (Inbox, Outbox & Newbox)**

Week	Date	Topic	Insight Due
1	1/25	Introduction	All assignments are due at 11:59 pm of the due date through Blackboard.
2	2/1	Chapters 1 & 2 (For Insight 1)	Insight 1( <b>1/28</b> ) Critique 1( <b>1/30</b> )
3	2/8	Chapter 3 (For Insight 2)	Insight 2 ( <b>2/4</b> )/ Critique 2( <b>2/6</b> )
4	2/15	Chapter 4 (For Insight 3)	Insight 3 ( <b>2/11</b> )/ Critique ( <b>2/13</b> )
5	2/22	Chapter 5 (For Insight 4)	Insight 4 ( <b>2/18</b> ) Critique ( <b>2/20</b> )
6	2/29	Chapter 6 (For Insight 5)	Insight 5 ( <b>2/25</b> ) Critique ( <b>2/27</b> )
7	3/7	Spring Break	No Post
8	3/14	Appendices 1, 2, 3, & 4	No Class
9	3/21	Chapter 7 (For Insight 6.0)	Insight 6 ( <b>3/17</b> ) Critique 6 ( <b>3/19</b> )
10	3/28	Chapter 8 (For Insight 6.5)	Insight 7 ( <b>3/24</b> ) Critique 7 ( <b>3/26</b> )
11	4/4	Chapter 9 (For Insight 7)	
12	4/11	Dr. Kim's Conference No class	Peer Final Project Meeting
13	4/18	Chapter 9	
14	4/25	Creativity Assessment	Final Literature Review Paper due <b>4/24</b> by midnight
15	5/2	Submission to Journal & Present to Class	Final submission to journal <b>5/1</b> by midnight