

**COURSE OF STUDY
CREATIVE PROBLEM SOLVING
TEC 830**

Section 1

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Section 2

Instructor: Prof. "Vigs" Chandra
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I. COURSE DESCRIPTION:

A review and analysis of basic and applied research in the development of creative behavior with emphasis on its application to technical teaching and industrial problem solving.

II. PREREQUISITE/S: None**III. SEMESTERS OFFERED:** Spring**IV. CREDIT HOURS:** Three (3) semester hours**V. TEXT/RESOURCE BOOKS (recommended):**

Von Oech, Roger. A Whack on the Side of the Head, New York: Warner Books, Inc.

Von Oech, Roger. A Kick in the Seat of the Pants, New York: Harper & Row Publishers, Inc.

VI. MATERIALS THAT MUST BE FURNISHED BY THE STUDENT:

Imagination, sensitivity, openness, and effort.

VII. COURSE OBJECTIVES:

Each student should develop:

- A. Familiarity with research and writing in the field of creative behavior.
- B. Familiarity with several creative techniques of problem solving and idea production.
- C. Ability to utilize several creative techniques of problem solving in groups or as individuals.
- D. Open-mindedness toward ideas.
- E. Appreciation of the effort involved in creative problem solving.
- F. Sensitivity to creative possibilities around us.
- G. Ability to recognize and define problems.
- H. Confidence in dealing with complex problems.

VIII. COURSE OUTLINE:

- 1) Introduction
 - a) What: Importance of creative imagination
 - b) Who: individuals, and groups
 - c) Where: In person-to-person relationships, in the home, in school, in science
 - d) Why: Importance in making decisions
 - e) When: Historical, current, & future
- 2) Creativity--what is it?
 - a) Terms
 - b) Design
 - c) Problem-solving
 - d) Imagination
 - e) Creativity
- 3) The Creative Person
 - a) Creative characteristics
 - b) Non-creative behaviors
 - c) Inhibitions to creativity
 - i) Perceptual
 - ii) Emotional
 - iii) Cultural
- 4) Environment and Creativity
 - a) Environmental effects on creativity
 - i) Community, School, Home, Job, Family
 - b) Creativity and its effects on environment
 - i) Past, Present, Future
- 5) The Creative Process
 - a) Conditions of creativity
 - (1) Receptivity, Immersion, Using errors, Imagination, and judgment
 - b) Encouraging the creative process
 - i) Phases
 - ii) Roles
 - iii) The creative problem-solving process
 - iv) Industrial problem-solving processes
- 6) Methods and Techniques for Stimulating Creativity and Idea Production
 - a) Attribute listing
 - b) Awareness development
 - c) Brainstorming
 - d) Checklists
 - e) Creative analysis
 - f) Story boarding
- 7) Measuring Creative Abilities
- 8) The Creative Product
 - a) Evaluation, Patents, Copyrights

IX. COURSE REQUIREMENTS: Students should satisfactorily complete all requirements as assigned by the instructor, including, but not necessarily limited to the following:

- Reading assignments, i.e. online and other assigned supplemental readings.
- Find a successful solution of a student-selected real problem that calls for unique and creative ideas, using a creative problem-solving process.
- Contribute to class discussion.
- Complete “weekly” written assignments.
- A final examination based on class discussions and reading assignments.
- Participation in reviews and critiques of peer assignments.
- Development of creative solutions to given creative problems and projects.
- A portfolio of class notes, assignments, and progress

X. EVALUATION PROCEDURES: Final evaluation will be determined by scores made on the following:

- 30% Written “weekly” papers (6 @ 5% each)
- 20% Individual Problem Solving Assignment
- 20% Written assignments (2 @ 10% each)
- 10% Class participation in Discussion Board critiques
- 10% Final Examination
- 5% Class participation in “chat”
- 5% Portfolio

XI. GRADE DISTRIBUTION: Final grades will be determined by the total points accumulated in relation to the total points possible.

A	= 90 - 100	(4.00)
B	= 80 - 89.9	(3.00)
C	= 70 - 79.9	(2.00)
D	= 60 - 69.9	(1.00)
F	= 59.9- 0	(0.00)

XII. MID-SEMESTER PROGRESS REPORT:
Mid-term grades will not apply in this summer class.

XIII. DISABILITY STATEMENT:

If you are registered with the Office of Services for Individuals with Disabilities, please make an appointment with the course instructor to discuss any academic accommodations you need. If you need academic accommodations and are not registered with the Office of Services for Individuals with Disabilities, please contact the office on the third floor of the Student Services Building, by email at disabilities@eku.edu or by telephone at (859) 622-2933 V/TDD. Upon individual request, this syllabus can be made available in alternative forms.

Tentative Schedule

* denotes a face-to-face session

Date	Activities
Saturday 5/14	Class web page, Lesson 1, Weekly Paper 1, and Bibliography Assignment Available
Monday 5/16*	Class Orientation - Overview, objectives, requirements, evaluation, online meetings, introductions. Lessons 1 Basics of Creativity & Problem Solving, weekly paper 1 and bibliography assignments reminded
Tuesday 5/17	Weekly Chat, Section 2, Chandra
Wednesday 5/18	Weekly Chat, Section 1 Richardson
Friday 5/20	Weekly paper 1 "CPS at Work" due
Saturday 5/21	Lesson – 2 The Creative Person, Weekly Paper 2 "Creative Person" Available
Monday 5/23	Bibliography Assignment Due
Tuesday 5/24	Weekly Chat, Section 2, Chandra
Wednesday 5/25	Weekly Chat, Section 1 Richardson
Friday 5/27	Weekly paper 2 "Creative Person" Due
Saturday 5/28	Lesson 3 - The Creative Process, Individual Projects and Book Report Assigned
Monday 5/30	<u>Bibliography Assignment Due</u> , Holiday, No Class
Tuesday 5/31	Weekly Chat, Section 2, Chandra
Wednesday 6/1	Weekly Chat, Section 1 Richardson
Friday 6/3	No Papers Due
Saturday 6/4	Lesson 4 - Environment and Creativity, Weekly Paper 3 "Creativity and the Environment" Assigned
Monday 6/6	Individual Project Proposals Due
Tuesday 6/7	Weekly Chat, Section 2, Chandra
Wednesday 6/8	Weekly Chat, Section 1 Richardson
Friday 6/10	Weekly Paper 3 "Creativity and the Environment" due
Saturday 6/11	Lesson 5 - Theories and Philosophy of Creativity, Weekly Paper 4 "Theories of Creativity" Assigned
Tuesday 6/14	Weekly Chat, Section 2, Chandra
Wednesday 6/15	Weekly Chat, Section 1 Richardson
Friday 6/17	Weekly Paper 4 "Theories of Creativity" Due
Saturday 6/18	Lesson 6 Methods and Techniques for Stimulating Creativity, Weekly Paper 5 "Techniques for Stimulating Creativity" Assigned
Monday 6/20	Book Report Assignment Due
Tuesday 6/21	Weekly Chat, Section 2, Chandra
Wednesday 6/22	Weekly Chat, Section 1 Richardson
Friday 6/24	Weekly Paper 5 "Stimulating Creativity" due
Saturday 6/25	Lesson 7- Testing for Creativity, Weekly Paper 6 "Testing for Creativity" assigned
Tuesday 6/28*	Individual Project Presentations, Section 2, Chandra
Wednesday 6/29*	Individual Project Presentations, Section 1 Richardson
Friday 7/1	Weekly Paper 6 "Testing for Creativity" Due
Saturday 7/2	Lesson 8, Inventions and Patents, Final Exam Assigned
Thursday 7/7	End of Summer Session, Last Day for Final Exam Submission