Montgomery County Community College
EGT 190
Principles of Critical Thinking in Technology
3-3-0

COURSE DESCRIPTION:
The primary aim of this course is to teach students how to apply standards of critical thinking to everyday problem solving situations in order to succeed in a rapidly changing world. Critical thinking standards are studied and applied to a variety of everyday situations to develop fact-finding and sound questioning skills in order to more effectively assess and find solutions to problem situations. Developing critical thinking behavior will improve the ability for the technology student to trouble-shoot systems. Business students will benefit by doing more efficient cost/benefit analysis and students of other disciplines will find learning how to think more critically a tremendous asset to their lives.

REQUISITES:
Previous Course Requirements
None

Concurrent Course Requirements
None

COURSE COMMENT
Must be a High School graduate

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Apply learned standards to more effectively make decisions and solve problems.	Lecture Class Discussion Class Research	Research Reports
2. Read and listen with greater clarity and depth.	Lecture Class Discussion Class Research	Research Reports
3. Write more efficiently and effectively with greater emphasis on fact-based content.	Lecture Class Discussion Class Research	Research Reports

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The

benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:
1. Becoming a Fair-minded Thinker.
2. Stages of Critical Thinking Development.
3. Understanding the Way You Reason.
4. Identifying the Parts of Thinking.
5. The Ten Standards for Critical Thinking.
6. Asking Questions That Lead to Good Solutions.
7. Mastering the Situation by Mastering the Content.
8. Discovering How the Best Thinkers Learn.
9. Redefining Grades as Levels of Thinking and Learning.
10. Making Good Decisions and Solving Difficult Problems.
11. Dealing With Your Irrational Mind.
12. How to Detect Bias in an Argument.
13. Mental Trickery & Manipulation.
14. Ethical Reasoning.
15. Fundamental Elements of Launching a New Business
16. Energy Issues in Power and Transportation

RESEARCH TOPICS:
- Fair-mindedness – Key Examples in Business, Industry, Government, and Education.

- Weak and Strong Sense Critical Thinking at Home and in the Workplace.

- Energy Challenges and Viable Alternatives

- How to Maximize your Education

- Making Big Decisions and Solving Difficult Problems

- Starting a Technology Business

- Ethical Behavior and Reasoning

LEARNING MATERIALS:
Textbooks:
Paul, Richard. (2012). *Critical Thinking* (Revised 3rd ed.).   Pearson.
ISBN 978-0-13-218091-7

Instructor Handouts

Other learning materials may be required and made available directly to the student via the College's Blackboard course management system.

COURSE APPROVAL:
Prepared by: H. Thomas Tucker, Jr.   Date: 11/28/2004
                      Assistant Professor of Engineering
Revised by: William H. Brownlowe   Date: 9/24/2013
                      Associate Professor of Engineering
VPAA/Provost or designee Compliance Verification: Date: 12/3/2013

This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.