



Course Syllabus

COURSE NUMBER: EDTC 5250.W1	COURSE TITLE Introduction to Programming I	TERM: Fall 2007
SITE: Online	INSTRUCTOR CONTACT INFORMATION: Mike Gage michaelgag73@webster.edu	CREDIT HOURS: 3

1. COURSE DESCRIPTION:

This course provides a foundation to allow the students to learn to write customized computer programs. The Python programming language is used as a means of teaching these concepts. At the completion of the course, the student will have the fundamental understanding required to enable them to learn to write more complete and useful computer programs. This capability will provide the classroom teacher with the freedom to use the computer as a tool not constrained by the design of purchased applications.

2. LEARNING OUTCOMES:

Course Outcomes	SoE Goals, SoE Dispositions, and MoSTEP/Prof Standards Addressed
The student will be gain the knowledge of personal computer interaction and language fundamentals to write moderately advanced computer programs.	Students will have fundamental knowledge that will enable them to develop the ability to: <ul style="list-style-type: none"> □ Develop software applications to create meaningful learning opportunities for all students □ Present subject matter in multiple ways, addressing the multiple experiences and learning styles of the students to meet the goals of the curriculum. □ Develop software applications that challenge the students to approach the material in new, effective ways. □ Develop software applications

specific to the social needs of the class.

- Develop software applications based upon cultural, gender, intellectual, and physical ability differences among the students.
- Develop software to automate repetitive or time-consuming aspects of student assessment, thereby improving student assessment effectiveness.
- Develop software to automate some aspects of self-assessment.
- Develop software to improve communication with colleagues, parents, and educational partners.

3. Schedule of required readings, class preparations and assignments, lectures, discussions, student presentations, out-of-class assignments and exams.

Module 1	The Command Prompt
Module 2	The System Environment
Module 3	Common System Tasks
Module 4	Installing Python
Module 5	Interacting with Python
Module 6	Help
Module 7	Data
Module 8	Storing Data in Variables
Module 9	Operating on Data
Module 10	Using Files to Store and Read Data
Module 11	Functions
Module 12	Returning Data from Functions
Module 13	Making Functions Most Useful
Module 14	Storing Statements in Modules
Module 15	Using Multiple Modules
Module 16	Putting It All Together

4. RESOURCES:

Required Text(s):

(none)

5. EVALUATION: (basis of evaluation with explanation regarding the nature of the assignment and the percentage of the grade assigned to each item below)

Assessments	Percentage of Grade
Weekly Assignments: The student will be developing short software applications and performing other computer system functions throughout the course. The student's grade will be based upon a demonstrated understanding of the principles that are being presented.	80%
Interest level: Each week there will be discussion topics posted in the discussion area. The student's participation in these discussions will be prorated to amount to cumulatively 20% of the final grade. The student's grade will be	20%

based upon participation in the discussions as well as the quality of the discussion postings, both in terms of insights and conformance to sound teaching and learning principles.	
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6. GRADING SCALE:

<p>93 – 100 = A 90 – 92 = A- 86 – 89 = B+ 83 – 85 = B 80 – 82 = B- 76 – 79 = C+</p>

ACADEMIC HONESTY POLICY

Students at Webster University are expected to practice academic honesty.

Avoiding Plagiarism

In its broadest sense, plagiarism is using someone else's work or ideas, presented or claimed as your own. While students are encouraged to communicate concepts and approaches to solving problems, copying the work of others is strictly prohibited.

Consequences of Academic Dishonesty:

Plagiarism may result in a failing grade and immediate discharge from the course.

For further information about the consequences of academic dishonesty please consult the Webster University Student Handbook.

ACCESSIBILITY/ACCOMMODATIONS POLICY

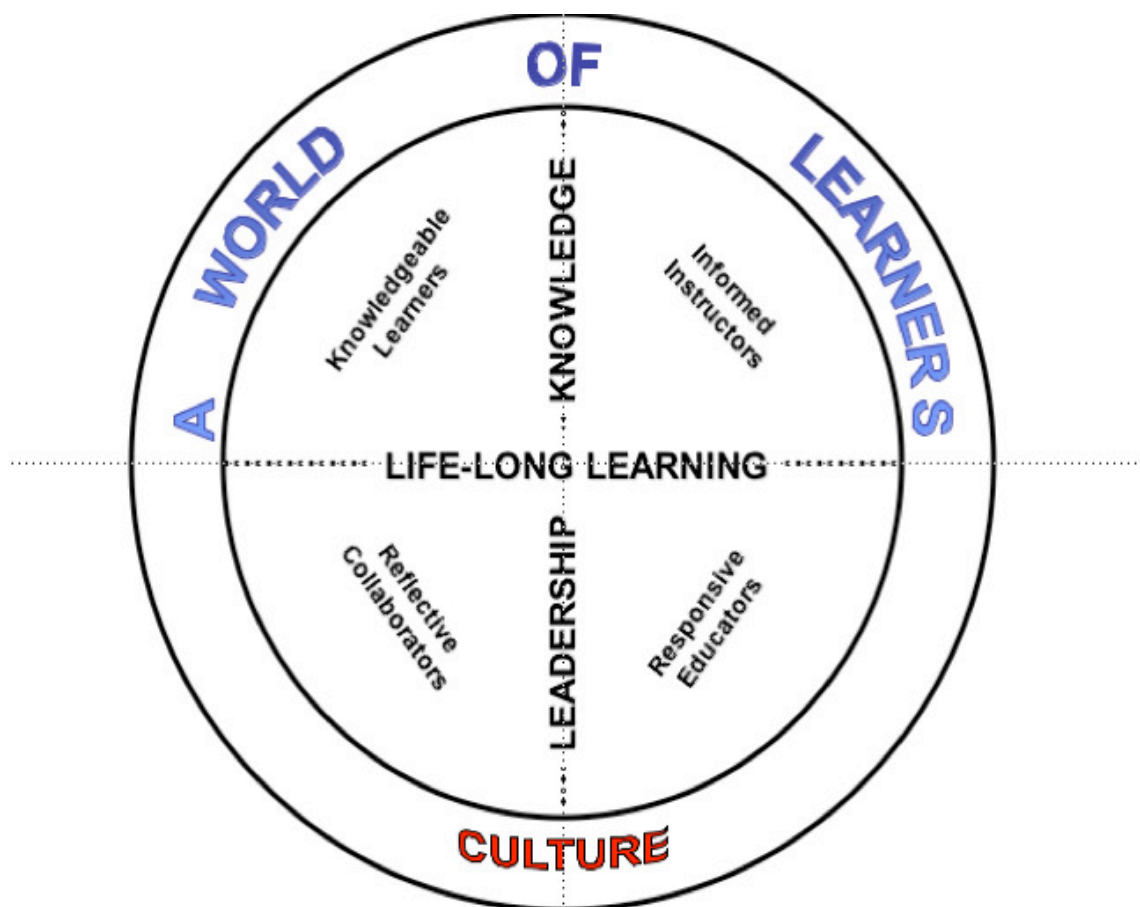
If you have a disability that may have some impact on your work in this class and for which you may require accommodations contact the Director of the Academic Resource Center, Dr. Pat McLeese, at (314) 968-7495.

**Webster University
School of Education**

Vision: “. . . We all must work to make this world worthy of its children.” (Casals, 1970)

Mission: The School of Education at Webster University provides its students with the knowledge, experiences, and practical tools that help them guide both themselves and others toward lifelong learning. The School of Education is a community of educator-scholars who apply critical reflections and creative energies to enhance learning in schools and other educational settings. The faculty strives to support this community by modeling effective teaching practices based on sound theory and research. Personalized approaches create a challenging, yet supportive environment that permits the risk-taking necessary for learning and growth. The School of Education encourages its faculty and students to work actively toward this end, keeping in mind that action must be rooted in visionary, yet realistic, thinking. This thought and action process underscores the development of an inner-directed self-understanding, an outer-directed global perspective, and an appreciation of human diversity that arises from both.

Theme: Developing a world of learners through knowledge, leadership, and life-long learning.



The universal mandala (a circle with intersecting vertical and horizontal lines) graphically represents the conceptual framework of the School of Education. The outer circle provides the framework for a “world of learners” in cultural settings. The two axes represent the theme components of knowledge, leadership, and life-long learning. These lines are broken to emphasize the fluid relationship of the goals and integrated concepts. Each quadrant represents one of the school’s four goals for its candidates: to develop knowledgeable learners, informed instructors, reflective collaborators, and responsive educators.

School of Education Goals

1. Education candidates will demonstrate knowledge of the subject matter, knowledge of the learner, and knowledge of pedagogy based on inquiry and scholarship.

The knowledgeable learner:

- 1.1 knows content that supports conceptual understanding;
 - 1.2 applies tools of inquiry to construct meaningful learning experiences;
 - 1.3 identifies developmental factors in student learning; and
 - 1.4 understands theoretical principles of effective instruction to plan learning experiences.
2. Education candidates will incorporate multiple assessment and instructional strategies to support effective educational practices based on research and theory.

The informed instructor:

- 2.1 designs curriculum based on students' prior knowledge, learning styles, strengths, and needs;
 - 2.2 understands and uses a range of instructional strategies;
 - 2.3 uses a variety of communication modes, media, and technology to support student learning; and
 - 2.4 employs a variety of formal and informal assessments to monitor learning and modify instruction.
3. Education candidates will reflect on the roles educators take as leaders of change through collaboration with colleagues, students, and families in schools and communities.

The reflective collaborator:

- 3.1 values and integrates reflection to grow as a professional;
 - 3.2 promotes communication and collaboration with colleagues, families, and community leaders;
 - 3.3 seeks relationships with families and students to support student learning; and
 - 3.4 initiates change that benefits students and their families.
4. Education candidates will demonstrate respect for diversity through responsive teaching and learning that values individual differences.

The responsive educator:

- 4.1 understands and responds appropriately to issues of diversity
- 4.2 acknowledges social and cultural contexts to create effective teaching and learning environments;
- 4.3 adapts instruction to the learner's knowledge, ability, and background experience; and
- 4.4 identifies resources for specialized services when needed.

School of Education Dispositions

NCATE defines dispositions as “the values, commitments and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator’s own professional growth. “ (Professional Standards, p. 53) There is significant value in focusing attention on qualities that make an effective teacher.

1. Understands and Respects Self
 - 1.1 Understands and respects that s (he) may be different from others
 - 1.2 Embraces an openness to change (adaptability, flexibility)
 - 1.3 Exhibits curiosity
 - 1.4 Engages in reflection
2. Understands and Respects Others
 - 2.1 Understands, respects, and responds appropriately to diversity in a variety of settings
 - 2.2 Exhibits empathy
 - 2.3 Commits to fairness and honesty
 - 2.4 Listens respectfully to other points of view

3. Understands and Respects Professional Communities
 - 3.1 Commits to professional behavior in university and school cultures
 - 3.2 Practices informed decision-making in university and school cultures
 - 3.3 Communicates and collaborates in university and school cultures
 - 3.4 Accepts academic rigor (willingness to work/ high expectations)
 - 3.5 Affects change with courage and confidence