SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 11.0801

SEMESTER: Departmental Syllabus

COURSE TITLE: CGI Perl

COURSE NUMBER: CIST0272

CREDIT HOURS: 3

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: Departmental Syllabus

KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): CIST-0137 (HTML Web Page Development).

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class.

COURSE DESCRIPTION: CGI Perl teaches CGI scripting techniques using the CGI Perl module. Students learn how to create on-demand, server-based HTML; write and process fill-out forms; write responses to form submissions back to the client browser; store and process cookies; handle file uploads securely; create, read, and write to text databases; attach JavaScript and cascading style sheets to created-on-demand web documents; and to maintain state through multi-page forms. Students also explore CGI Perl’s role in server push technology and continuous page updating (NPH). Students are not required to have previous Perl programming experience, although a thorough knowledge of HTML is necessary.

METHOD OF INSTRUCTION: A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:
I. Introduction to Perl and CGI programming
   A. Installing a personal web server & Perl5 distribution
   B. Practical Extraction and Report Language
   C. Common Gateway Interface
   D. Perl modules

II. CGI.pm Basics
   A. What is CGI.pm?
   B. Displacing a plain text file
   C. Creating static HTML pages

III. CGI.pm Intermediate
   A. Dynamic page updates
   B. Inserting in-line images
   C. Creating dynamic links
   D. Creating Ordered Lists
   E. Using HTML
   F. Creating tables
   G. Converting from tab-delimited to tables on-the-fly
   H. CGI Perl parameters
   I. CGI Perl branching
   J. Fill-in forms
   K. CGI.pm file functions
   L. Redirection
   M. Arrays
   N. Creating custom tags

IV. Advanced CGI.pm
   A. Debugging
   B. Custom Error messages
   C. CGI.pm and custom cascading style sheets
   D. CGI.pm and JavaScript
   E. Clickable Image Maps
   F. Saving State to files
   G. Object-oriented programming with CGI.pm
   H. Importing parameters into a Namespace
   I. File Uploads
   J. Using cookies to maintain state
   K. Fancy HTTP headers
   L. Page refreshing
   M. Controlling Caching
   N. CGI.pm and frames
   O. MPH mode and Server Push
EXPECTED LEARNER OUTCOMES:

A. The student will be able to define Perl and CGI.
B. The student will be able to describe the installation of a personal web server.
C. The student will be able to describe the installation of Perl.
D. The student will be able to explain CGI.pm basics.
E. The student will be able to create static HTML pages.
F. The student will be able to explain CGI.pm intermediate programming.
G. The student will be able to explain using CGI to fill-in forms.
H. The student will be able to identify form elements.
I. The student will be able to explain redirection in CGI.
J. The student will be able to summarize the use of arrays.
K. The student will be able to explain the debugging process.
L. The student will be able to discuss the advanced CGI abilities.

COURSE COMPETENCIES:
Upon successful completion of this course:
The student will be able to define Perl and CGI.
1. The student will be able to define Perl and CGI.
The student will be able to describe the installation of a personal web server.
2. The student will be able to describe the installation of a personal web server.
3. The student will be able to install a personal web server.
The student will be able to describe the installation of Perl.
4. The student will be able to describe the installation of Perl.
5. The student will be able to install Perl.
The student will be able to explain CGI.pm basics.
6. The student will be able to explain CGI.pm basics.
7. The student will be able to demonstrate the use of basic CGI.pm commands
The student will be able to create static HTML pages.
8. The student will be able to create static HTML pages
9. The student will be able to create simple HTML pages using CGI.
10. The student will be able to insert in-line graphics into HTML pages using CGI.
11. The student will be able to create a CGI script using basic commands
The student will be able to explain CGI.pm intermediate programming
12. The student will be able to explain CGI.pm intermediate programming.
13. The student will be able to identify the basic elements of intermediate CGI.
The student will be able to explain using CGI to fill-in forms.
14. The student will be able to explain using CGI to fill-in forms.
15. The student will be able to identify form elements.
16. The student will be able to create fill-out forms using all form elements.
17. The student will be able to create on-the-fly HTML responses to submitted forms.
18. The student will be able to process and validate HTML form input.
The student will be able to explain redirection in CGI.
19. The student will be able to explain redirection in CGI.
The student will be able to summarize the use of arrays.
20. The student will be able to summarize the use of arrays.
21. The student will be able to demonstrate the use of arrays.
   The student will be able to explain the debugging process.
22. The student will be able to explain the debugging process.
23. The student will be able to effectively debug CGI Perl scripts.
   The student will be able to discuss the advanced CGI abilities.
24. The student will be able to discuss the advanced CGI abilities.
25. The student will be able to explain the use of cookies.
26. The student will be able to demonstrate the ability to read, write, and delete cookies.
27. The student will create “fancy” HTTP headers.
28. The student will use CGI Perl to create and write to frames.
29. The student will use CGI Perl to implement server push and NPG mode

**ASSESSMENT OF LEARNER OUTCOMES:**
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

**SPECIAL NOTES:**
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center at 913-288-7670.