

DEPARTMENT OF SCIENCE

COURSE OUTLINE – Winter 2023

CS3990: Web Based Internet Technology – 3 (3-0-3) UT 90 Hours for 15 Weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR: Dr. Mohamed Elgamal **PHONE:** 780-539-2976
OFFICE: C-427 **E-MAIL:** melgamal@nwpolytech.ca
OFFICE HOURS: Wed. 13:30-14:20 or by Appointment

CALENDAR DESCRIPTION:

This course introduces students to various aspects of Internet and web technologies such as HTML/XHTML, CSS, XML, and JavaScript through research and project related assignments. The exact topics covered in this course will be at the discretion of the instructor.

PREREQUISITE(S)/COREQUISITE:

CS2010

REQUIRED TEXT/RESOURCE MATERIALS:

The text “Web Programming Step-by-Step” Second Edition by M Stepp, J Miller, and V Kirst is a suggested book as well as the two books by Jon Duckett: “JavaScript & jQuery” and “HTML & CSS”. Web resources will also be frequently used, such as, w3schools.com, css-tricks.com, php.net, jquery.com, etc. Please note that this is not a complete list; more resources will be added when necessary.

DELIVERY MODE(S):

In-Person, On-Campus

This course includes 3-hours of lectures and a 3-hour lab per week

Lectures: E305 MW 10:00 - 11:20
Lab: TBD

COURSE OBJECTIVES:

This course will introduce students to:

- HTML and Cascading style sheets (CSS)
- The programming languages JavaScript and PHP
- The document object model (DOM)
- XML, JSON and AJAX (asynchronous JavaScript and XML)
- Web sessions and cookies
- jQuery library
- Web security
- Principles of web design

LEARNING OUTCOMES:

As a result of taking this course, students will gain the ability to:

- Create both static and dynamic web pages.
- Create secure web-based applications that have both a client and server component and can interact with databases

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.ca>.

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

Assignments (Lab and take home)	30%
Project	10%
Midterm 1	15%
Midterm 2	15%
Final Exam	30%

Late work will not be accepted and will be granted a mark of 0. All work must be submitted via myClass; no emailed assignments will be accepted. The due date for each assessment will be posted in the myClass.

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

- HTML Basics
- Cascading Style Sheets (CSS)
- Page Layout and Forms
- JavaScript, Event handling and DOM
- Mid Term Exam 1
- Ajax, XML, JSON
- Server-side programming - PHP, NODE.JS, Databases, SQL
- Web Security
- Mid Term Exam 2
- Project Demonstration

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the Northwestern Polytechnic Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the Student Rights and Responsibilities policy which can be found at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

**Note: all Academic and Administrative policies are available on the same page.